September 12, 2008

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of	)	
	)	Docket Nos. 50-282-LR
Nuclear Management Co., et al.	)	50-306-LR
	)	
(Prairie Island Nuclear Generating Plant,	)	ASLBP No. 08-871-01-LR
Units 1 and 2)	)	

NUCLEAR MANAGEMENT COMPANY'S ANSWER TO THE
PRAIRIE ISLAND INDIAN COMMUNITY'S PETITION TO INTERVENE

I. INTRODUCTION

Nuclear Management Company, LLC ("NMC") hereby answers and opposes the "Prairie Island Indian Community's Notice of Intent to Participate and Petition to Intervene," dated August 18, 2008 ("Petition" or "Pet."), which seeks a hearing in the license renewal proceeding for the Prairie Island Nuclear Generating Plant ("PINGP"). The Petition should be denied because none of the contentions proposed by the Prairie Island Indian Community (the "PIIC") meets the NRC standards for admissibility.

In particular, none of the PIIC's contentions is supported by the opinion of any experts who have reviewed the PINGP license renewal application. In a number of instances, the PIIC does repeat statements made by declarants in the Indian Point proceeding, but makes no demonstration that such statements are germane to PINGP or that the declarant would be prepared to submit a similar statement under oath with respect to PINGP. In short, while NMC values its relationship with its neighbor, NMC respectfully submits that none of the PIIC's

contentions is supported by information demonstrating the existence of any genuine material dispute regarding the PINGP application.

II. PROCEDURAL BACKGROUND

By application dated April 11, 2008 and supplemented May 16, 2008, NMC requested renewal of Operating License Nos. DPR-42 and DPR-60 for the PINGP Units 1 and 2 (the "Application"). On June 17, 2008, the Nuclear Regulatory Commission ("NRC" or "Commission") published a Notice of Opportunity for Hearing ("Notice") regarding this Application. 73 Fed. Reg. 34,335 (June 17, 2008). The Notice permitted any person whose interest may be affected to file a request for hearing and petition for leave to intervene within 60 days of the Notice. Id.

The Notice directed that any petition must set forth with particularity the interest of the petitioner and how that interest may be affected (i.e., standing), as well as the specific contentions sought to be litigated. Id. at 34,335-36. The Notice stated:

> Each contention must consist of a specific statement of the issue of law or fact to be raised or controverted. In addition, the requestor/petitioner shall provide a brief explanation of the bases of each contention and a concise statement of the alleged facts or the expert opinion that supports the contention on which the requestor/petitioner intends to rely in proving the contention at the hearing. The requestor/petitioner must also provide references to those specific sources and documents of which the requestor/petitioner is aware and on which the requestor/petitioner intends to rely to establish those facts or expert opinion. The requestor/petitioner must provide sufficient information to show that a genuine dispute exists with the applicant on a material issue of law or fact. Contentions shall be limited to matters within the scope of the action under consideration. The contention must be one that, if proven, would entitle the requestor/petitioner to relief. A requestor/petitioner who fails to satisfy these requirements with respect to at least one contention will not be permitted to participate as a party.

Id. at 34,336.

III. STANDING

NMC does not dispute the PIIC's standing.

IV. PETITIONERS' CONTENTIONS DO NOT MEET THE COMMISSION'S STANDARDS FOR ADMISSIBILITY

In order to be admitted to a proceeding, a petitioner must plead at least one admissible contention. 10 C.F.R. § 2.309(a). For the reasons set forth below, the PIIC has not done so, and therefore the Petition must be denied.

A. Standards for Contentions

1. Contentions Must Be Within the Scope of the Proceeding and May Not Challenge NRC's Rules

As a fundamental requirement, a contention is only admissible if it addresses matters within the scope of the proceeding and does not seek to attack the NRC's regulations governing the proceeding. This fundamental limitation is particularly important in a license renewal proceeding because the Commission has conducted extensive rulemaking to define the technical and environmental showing that an applicant must make. As discussed later in this Answer, certain of the PIIC's contentions are beyond the scope of this proceeding.

10 C.F.R. Part 54 governs the health and safety matters that must be considered in a license renewal proceeding. The Commission has specifically limited this safety review to the matters specified in 10 C.F.R. §§ 54.21 and 54.29(a),[1] which focus on the management of aging of certain systems, structures and components, and the review of time-limited aging evaluations. See Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-

[1] The Commission has stated that the scope of review under its rules determines the scope of admissible issues in a license renewal hearing. 60 Fed. Reg. 22,461, 22,482 n.2 (May 8, 1995). "Adjudicatory hearings in individual license renewal proceedings will share the same scope of issues as our NRC Staff review, for our hearing process (like our Staff's review) necessarily examines only the questions our safety rules make pertinent." Turkey Point, CLI-01-17, 54 N.R.C. at 10.

17, 54 N.R.C. 3, 7-8 (2001); Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2), CLI-02-26, 56 N.R.C. 358, 363 (2002). Thus, the potential effect of aging on systems, structures and components is the issue that defines the scope of the safety review in license renewal proceedings. Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-36, 60 N.R.C. 631, 637 (2004).

The rules in 10 C.F.R. Part 54 are intended to make license renewal a stable and predictable process. 60 Fed. Reg. at 22,461, 22,462, 22,463, 22,485. As the Commission has explained, "[w]e sought to develop a process that would be both efficient, avoiding duplicative assessments where possible, and effective, allowing the NRC Staff to focus its resources on the most significant safety concerns at issue during the renewal term." Turkey Point, CLI-01-17, 54 N.R.C. at 7 (2001). "License renewal reviews are not intended to 'duplicate the Commission's ongoing reviews of operating reactors.'" Id. (citation omitted). To this end, the Commission has confined 10 C.F.R. Part 54 to those issues uniquely determined to be relevant to the public health and safety during the period of extended operation, leaving all other safety issues to be addressed by the existing regulatory processes. 60 Fed. Reg. at 22,463. This scope is based on the principle established in the rulemaking proceedings that, with the exception of the detrimental effects of aging and a few other issues related to safety only during the period of extended operation, the existing regulatory processes are adequate to ensure that the licensing bases of currently operating plants provide and maintain an adequate level of safety. 60 Fed. Reg. at 22,464, 22,481-82. Consequently, license renewal does not focus on operational issues, because these issues "are effectively addressed and maintained by ongoing agency oversight, review, and enforcement." Millstone, CLI-04-36, 60 N.R.C. at 638 (footnote omitted).

The NRC rules governing environmental matters – which are contained in 10 C.F.R. §§ 51.53(c), 51.95(c), and Appendix B to Part 51 – are similarly intended to produce a more focused and, therefore, more effective review. 61 Fed. Reg. 28,467 (June 5, 1996); Turkey Point, CLI-01-17, 54 N.R.C. at 11. To accomplish this objective, the NRC prepared a comprehensive Generic Environmental Impact Statement for License Renewal of Nuclear Plants (1996) ("GEIS"), NUREG-1437, and made generic findings in the GEIS, which it then codified in Appendix B to 10 C.F.R. Part 51. Those issues that could be resolved generically for all plants are designated as Category 1 issues and are not evaluated further in a license renewal proceeding (absent waiver or suspension of the rule by the Commission based on new and significant information). 61 Fed. Reg. at 28,468, 28,470, 28,474; Turkey Point, CLI-01-17, 54 N.R.C. at 12. The remaining (i.e., Category 2) issues that must be addressed in an applicant's environmental report are defined specifically in 10 C.F.R. § 51.53(c). See generally, Turkey Point, CLI-01-17, 54 N.R.C. at 11-12.

10 C.F.R. § 2.309(f)(1)(iii)-(iv) requires that a petitioner demonstrate that the issue raised by each of its contentions is within the scope of the proceeding and material to the findings that the NRC must make. Licensing boards "are delegates of the Commission" and, as such, they may "exercise only those powers which the Commission has given [them]." Public Service Co. of Indiana (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-316, 3 N.R.C. 167, 170 (1976) (footnote omitted); accord Portland General Electric Co. (Trojan Nuclear Plant), ALAB-534, 9 N.R.C. 287, 289-90 & n.6 (1979). Accordingly, it is well established that a contention is not cognizable unless it is material to a matter that falls within the scope of the proceeding for which the licensing board has been delegated jurisdiction. Marble Hill, ALAB-316, 3 N.R.C. at 170-71; see also Commonwealth Edison Co. (Zion Station, Units 1 and 2),

ALAB-616, 12 N.R.C. 419, 426-27 (1980); Commonwealth Edison Co. (Carroll County Site), ALAB-601, 12 N.R.C. 18, 24 (1980).

It is also well established that a petitioner is not entitled to an adjudicatory hearing to attack generic NRC requirements or regulations. Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2 and 3), CLI-99-11, 49 N.R.C. 328, 334 (1999). "[A] licensing proceeding . . . is plainly not the proper forum for an attack on applicable statutory requirements or for challenges to the basic structure of the Commission's regulatory process." Philadelphia Electric Co. (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 A.E.C. 13, 20, aff'd in part on other grounds, CLI-74-32, 8 A.E.C. 217 (1974) (footnote omitted). Thus, a contention which collaterally attacks a Commission rule or regulation is not appropriate for litigation and must be rejected. 10 C.F.R. § 2.335; Potomac Electric Power Co. (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-218, 8 A.E.C. 79, 89 (1974). A contention which "advocate[s] stricter requirements than those imposed by the regulations" is "an impermissible collateral attack on the Commission's rules" and must be rejected. Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), LBP-82-106, 16 N.R.C. 1649, 1656 (1982); see also Arizona Public Service Co. (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), LBP-91-19, 33 N.R.C. 397, 410, aff'd in part and rev'd in part on other grounds, CLI-91-12, 34 N.R.C. 149 (1991). Likewise, a contention that seeks to litigate a generic determination established by Commission rulemaking is "barred as a matter of law." Pacific Gas & Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-93-1, 37 N.R.C. 5, 29-30 (1993).

These limitations are controlling in this proceeding in that the scope of admissible environmental contentions is constrained by 10 C.F.R. §§ 51.53(c), 51.95(c), and Appendix B to Part 51; and the scope of technical contentions is constrained by 10 C.F.R. Part 54. See Turkey

Point, CLI-01-17, 54 N.R.C. at 11-13; see also Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-00-23, 52 N.R.C. 327, 329 (2000); Baltimore Gas & Electric Co. (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-14, 48 N.R.C. 39, 41, motion to vacate denied, CLI-98-15, 48 N.R.C. 45, 56 (1998); Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2 and 3), CLI-98-17, 48 N.R.C. 123, 125 (1998).

2. Contentions Must Be Specific and Supported By a Basis Demonstrating a Genuine, Material Dispute

In addition to the requirement to address issues within the scope of the proceeding, a contention is admissible only if it provides:

- a "specific statement of the issue of law or fact to be raised or controverted;"
- a "brief explanation of the basis for the contention;"
- a "concise statement of the alleged facts or expert opinions" supporting the contention together with references to "specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue;" and
- "[s]ufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact," which showing must include "references to specific portions of the application (including the applicant's environmental report and safety report) that the petitioner disputes and the supporting reasons for each dispute, or, if the petitioner believes that the application fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioner's belief."

10 C.F.R. § 2.309(f)(1)(i), (ii), (v) and (vi). The failure of a contention to comply with any one of these requirements is sufficient grounds for dismissing the contention. Palo Verde, CLI-91-12, 34 N.R.C. at 155-56.

These pleading standards governing the admissibility of contentions are the result of a 1989 amendment to 10 C.F.R. § 2.714, now § 2.309, which was intended "to raise the threshold for the admission of contentions." 54 Fed. Reg. 33,168 (Aug. 11, 1989); see also Oconee, CLI-

99-11, 49 N.R.C. at 334; Palo Verde, CLI-91-12, 34 N.R.C. at 155-56. The Commission has stated that the "contention rule is strict by design," having been "toughened . . . in 1989 because in prior years 'licensing boards had admitted and litigated numerous contentions that appeared to be based on little more than speculation.'" Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 N.R.C. 349, 358 (2001) (citation omitted). The pleading standards are to be enforced rigorously. "If any one . . . is not met, a contention must be rejected." Palo Verde, CLI-91-12, 34 N.R.C. at 155 (citation omitted). A licensing board is not to overlook a deficiency in a contention or assume the existence of missing information. Id.

The Commission has explained that this "strict contention rule" serves multiple purposes, which include putting other parties on notice of the specific grievances and assuring that full adjudicatory hearings are triggered only by those able to proffer at least some minimal factual and legal foundation in support of their contentions. Oconee, CLI-99-11, 49 N.R.C. at 334. By raising the threshold for admission of contentions, the NRC intended to obviate lengthy hearing delays caused in the past by poorly defined or supported contentions. Id. As the Commission reiterated in incorporating these same standards into the new Part 2 rules, "[t]he threshold standard is necessary to ensure that hearings cover only genuine and pertinent issues of concern and that issues are framed and supported concisely enough at the outset to ensure that the proceedings are effective and focused on real, concrete issues." 69 Fed. Reg. 2,182, 2,189-90 (Jan. 14, 2004).

Under these standards, a petitioner is obligated "to provide the [technical] analyses and expert opinion" or other information "showing why its bases support its contention." Georgia Institute of Technology (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-6, 41

N.R.C. 281, 305, vacated in part and remanded on other grounds, CLI-95-10, 42 N.R.C. 1, aff'd in part, CLI-95-12, 42 N.R.C. 191 (1995). Where a petitioner has failed to do so, "the [Licensing] Board may not make factual inferences on [the] petitioner's behalf." Id., citing Palo Verde, CLI-91-12, 34 N.R.C. 149. See also Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-98-7, 47 N.R.C. 142, 180 (1998) (a "bald assertion that a matter ought to be considered or that a factual dispute exists . . . is not sufficient"; rather "a petitioner must provide documents or other factual information or expert opinion" to support a contention's "proffered bases") (citations omitted).

Further, admissible contentions "must explain, with specificity, particular safety or legal reasons requiring rejection of the contested [application]." Millstone, CLI-01-24, 54 N.R.C. at 359-60. In particular, this explanation must demonstrate that the contention is "material" to the NRC's findings and that a genuine dispute on a material issue of law or fact exists. 10 C.F.R. § 2.309(f)(1)(iv), (vi). The Commission has defined a "material" issue as meaning one where "resolution of the dispute would make a difference in the outcome of the licensing proceeding." 54 Fed. Reg. at 33,172 (emphasis added).

As observed by the Commission, this threshold requirement is consistent with judicial decisions, such as Conn. Bankers Ass'n v. Bd. of Governors, 627 F.2d 245, 251 (D.C. Cir. 1980), which held that:

> [A] protestant does not become entitled to an evidentiary hearing merely on request, or on a bald or conclusory allegation that . . . a dispute exists. The protestant must make a minimal showing that material facts are in dispute, thereby demonstrating that an "inquiry in depth" is appropriate.

Id. (footnote omitted); see also Calvert Cliffs, CLI-98-14, 48 N.R.C. at 41 ("It is the responsibility of the Petitioner to provide the necessary information to satisfy the basis requirement for the admission of its contentions . . . ."). A contention, therefore, is not to be

admitted "where an intervenor has no facts to support its position and where the intervenor contemplates using discovery or cross-examination as a fishing expedition which might produce relevant supporting facts." 54 Fed. Reg. at 33,171.[2] As the Commission has emphasized, the contention rule bars contentions where petitioners have what amounts only to generalized suspicions, hoping to substantiate them later, or simply a desire for more time and more information in order to identify a genuine material dispute for litigation. Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2), CLI-03-17, 58 N.R.C. 419, 424 (2003).

Therefore, under the Rules of Practice, a statement "that simply alleges that some matter ought to be considered" does not provide a sufficient basis for a contention. Sacramento Municipal Utility District (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 N.R.C. 200, 246 (1993), review declined, CLI-94-2, 39 N.R.C. 91 (1994). Similarly, a mere reference to documents does not provide an adequate basis for a contention. Baltimore Gas & Electric Co. (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 N.R.C. 325, 348 (1998).

Rather, NRC's pleading standards require a petitioner to read the pertinent portions of the license application, including the safety analysis report and the environmental report, state the applicant's position and the petitioner's opposing view, and explain why it has a disagreement with the applicant. 54 Fed. Reg. at 33,170; Millstone, CLI-01-24, 54 N.R.C. at 358. If the petitioner does not believe these materials address a relevant issue, the petitioner is "to explain why the application is deficient." 54 Fed. Reg. at 33,171; Palo Verde, CLI-91-12, 34 N.R.C. at 156. A contention that does not directly controvert a position taken by the applicant in the

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[2] See also Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), ALAB-687, 16 N.R.C. 460, 468 (1982), vacated in part on other grounds, CLI-83-19, 17 N.R.C. 1041 (1983) ("[A]n intervention petitioner has an ironclad obligation to examine the publicly available documentary material pertaining to the facility in question with sufficient care to enable [the petitioner] to uncover any information that could serve as the foundation for a specific contention. Stated otherwise, neither Section 189a. of the Act nor Section 2.714 [now 2.309] of the Rules of Practice permits the filing of a vague, unparticularized contention, followed by an endeavor to flesh it out through discovery against the applicant or staff.").

license application is subject to dismissal. See Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Unit 2), LBP-92-37, 36 N.R.C. 370, 384 (1992), appeal dismissed, CLI-93-10, 37 N.R.C. 192, stay denied, CLI-93-11, 37 N.R.C. 251 (1993). Furthermore, an allegation that some aspect of a license application is "inadequate" or "unacceptable" does not give rise to a genuine dispute unless it is supported by facts and a reasoned statement of why the application is unacceptable in some material respect. Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-90-16, 31 N.R.C. 509, 521 & n.12 (1990).

B. The PIIC's Contentions Are Inadmissible

As explained below, none of the PIIC's proposed contentions meet the applicable standards for the admission of contentions in NRC licensing proceedings.

1. Contention 1: Historical and Archaeological Resources

Contention 1, which alleges that NMC's Environmental Report ("ER," which is provided as Appendix E to the Application) does not contain sufficient information on historic and archaeological resources (Petition at 5), is inadmissible because it does not address the information in the Application, and thus does not demonstrate the existence of a genuine, material dispute with the Application. Further, Contention 1 is not supported by any expert opinion or other document or source indicating that renewal of the PINGP licenses will have any adverse effect on cultural resources. Finally, portions of Contention 1 seek to raise issues beyond the scope of this proceeding.

The PIIC's challenge appears to focus primarily on the sufficiency of a cultural resources assessment performed by The 106 Group, but this challenge ignores information presented in the ER. The PIIC claims that The 106 Group assessment did not involve fieldwork (Petition at 7) and argues that there is a need for an onsite archaeological survey. The ER, however, states:

"four professional archaeological surveys and one testing project have been conducted within the plant boundaries." ER at D-3 (emphasis added). See also ER at 2-38. As indicated in the ER, The 106 Group was retained to document these past studies to provide information to assist with planning and avoidance of known resources. ER at D-3. Thus, the fact that The 106 Group did not perform field work is irrelevant. It does not indicate any insufficiency in the prior surveys that have been conducted within PINGP boundaries. The PIIC provides no information to suggest that the cultural resources at PINGP have not been adequately surveyed. The PIIC provides no expert opinion, reference, or source that indicates any deficiency in The 106 Group assessment (which NMC previously provided to the PIIC)[3] or in any of the prior surveys, which did involve fieldwork.

The PIIC also asserts that The 106 Group appeared unaware of the plans for temporary facilities related to the Unit 2 steam generator replacement project. Petition at 7. This assertion is also irrelevant. As previously stated, The 106 Group was retained to document past studies. It was not retained to conduct new surveys or analyze the effects of future projects. The PIIC provides no explanation of how an alleged absence of awareness of the steam generator replacement project could affect the review and documentation of past studies.

The PIIC's claims concerning the steam generator replacement project similarly fail to address information in the Application or demonstrate the existence of a genuine, material dispute. The PIIC argues that the conclusion in the ER that this project will not have an impact on cultural resources is faulty because "it is not disclosed exactly where construction activities for the steam generator replacement project will occur." Petition at 8. The PIIC ignores the

[3] Because The 106 Group Assessment shows the location of burial mounds, which is considered sensitive information that should not be publicly disclosed in order to protect those resources, it is not included as part of the ER.

statements in the ER which note that the temporary construction area is planned to be located northwest of the turbine building (ER at 3-16) and that the temporary construction facilities associated with the steam generator replacement project would be in previously disturbed areas and away from known cultural resources. ER at D-4. Based on the multiple prior surveys, The 106 Group assessment identified previously disturbed areas that have little or no potential for intact archeological resources. Id.[4] Thus, while the exact location of the temporary facilities is not specified (indeed, is not known since this project will not occur for several years), NMC's statement that such facilities will be located in previously disturbed areas that have been identified as having little or no archeological significance makes the specification of exact location of temporary facilities immaterial.

Further, the ER describes the existing site procedure to protect cultural resources at PINGP. ER at 4-54. As stated in the ER:

> The procedure requires a review of any planned excavation (greater than 6 inches deep) to ensure the protection of archaeological and historical resources. The Site Environmental Coordinator is responsible for determining if proposed land-disturbing activity will occur in the vicinity of a culturally-significant site, and if so, consulting with the SHPO to mitigate potential impacts. The Site Environmental Coordinator is also responsible for evaluating any cultural artifacts inadvertently discovered during construction to determine if the material discovered has potential archaeological or historic significance and thus should be reported to the SHPO. In any case, the discovery of cultural artifacts at NMC-managed nuclear plants requires employees to stop work until the Site Environmental Coordinator has evaluated the situation. Work can resume only after the situation had been addressed, disposition of any material or artifacts has been documented, and the Site Environmental Coordinator agrees that culturally-significant material is not at risk. These controls ensure that known archaeological/historical sites are avoided and newly-discovered archaeological/historical sites are protected.

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[4] The PIIC asserts that The 106 Group's conclusion quoted on page 7 of the Petition strongly suggests the need to do a field assessment of potential resources, even in previously disturbed areas. Petition at 7. The conclusion quoted on page 7 relates explicitly to undisturbed areas and on its face provides no support for the PIIC's assertion.

Id. at 4-54 to 4-55. Thus, even though potential construction facilities will be located in disturbed areas with little or no potential to affect cultural resources, protective measures will be implemented to avoid any previously unforeseen impacts should such resources be unexpectedly encountered. Consequently, there is ample basis for the conclusion in the ER.

The PIIC asserts that it is unclear whether the Environmental Coordinator has any expertise or qualifications to make judgments under the protective procedure. Such unsupported speculation provides no basis for an admissible contention. Further, because the PIIC is acting as a Cooperating Agency with the NRC in preparing the Supplemental Environmental Impact Statement ("SEIS") for renewal of the PINGP licenses, it attended the NRC's recent environmental audit at PINGP and is aware that NMC has committed to provide training to the Environmental Coordinator on identification of archeological resources. Moreover, as the PIIC acknowledges (Petition at 8), the ER indicates that any discovery of archeological resources will be assessed by a professional archeologist, and the ER also states that NMC would consult with the State Historic Preservation Office ("SHPO"). ER at D-4.

Similarly, the PIIC argues that, since the decision as to whether proposed land disturbing activities will occur in the vicinity of a culturally significant site would be made in the timeframe of ongoing construction activity, "the pressure to proceed with work is great." Petition at 8. This suggestion is baseless. The PIIC provides no information that would indicate that NMC would violate its procedures or the law in order to adhere to a construction schedule, and a contention that presupposes regulatory violations without some particularized demonstration is inadmissible. Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant), LBP-99-25 50

N.R.C. 25, 34 (1999) citing General Public Utilities Nuclear Corp. (Oyster Creek Nuclear Generating Station), LBP-96-23, 44 N.R.C. 143, 164 (1996).[5]

Finally, the PIIC argues that the ER should discuss how a future expansion of the Independent Spent Fuel Storage Installation ("ISFSI") at PINGP might affect archeological or historic resources. Petition at 9. This claim is inadmissible for a number of reasons.

Foremost, there is currently no proposal before the NRC to expand the PINGP ISFSI. The PINGP ISFSI, which is operated under a separate specific license, authorizes NMC to store spent fuel in up to 48 casks. This provides sufficient casks to store all spent fuel that will be generated through 2022. Additional dry cask storage would only be necessary if fourteen years from now the U.S. Department of Energy has still failed to fulfill its obligation to begin acceptance of spent fuel for disposal. Thus, whether additional dry cask storage will be required is at this juncture hypothetical and speculative.

The Commission has held that, to bring the National Environmental Policy Act ("NEPA") into play, a possible future action must at least constitute a "proposal" pending before the agency. Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-14, 55 N.R.C. 278, 295 (2002).

> Kleppe [v. Sierra Club, 427 U.S. 390 (1976)]. . . clearly establishes that an EIS need not delve into the possible effects of a hypothetical project, but need only focus on the impact of the particular proposal at issue and other pending or recently approved proposals that might be connected to or act cumulatively with the proposal at issue.

Id., citing Nat'l Wildlife Fed'n v. FERC, 912 F.2d 1471, 1478 (D.C. Cir. 1990) (emphasis in original). As the Commission indicated, "proposals" are "concrete or reasonably certain

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[5] The PIIC also criticizes archeological work that was performed in the late 1960s by Elden Johnson prior to the construction of PINGP. Petition at 10-11. General fears or criticisms of past practices of the nuclear industry or the applicant are not appropriate bases for contentions. See Wisconsin Electric Power Co. (Point Beach Nuclear Plant, Units 1 and 2), LBP-81-55, 14 N.R.C. 1017, 1026 (1981), aff'd, ALAB-696, 16 N.R.C. 1245 (1982).

projects." CLI-02-14, 55 N.R.C. at 295. The Commission considered the possibility of a future license amendment application simply too inchoate to constitute a proposal. Id. at 296.[6]

Here, NMC's Application to the NRC for renewal of the Units 1 and 2 operating licenses does not include any proposal to expand its ISFSI. Nor has NMC applied to the NRC for an amendment to its ISFSI license to expand the existing storage capacity.[7] Whether such expansion will ever be necessary will depend on the Department of Energy's progress in licensing the Yucca Mountain repository or establishing some other means to fulfill its obligation to accept spent fuel. Further, whether NMC will apply to expand the current, NRC-licensed capacity of the ISFSI will not be known until around 2018 or 2019. In sum, the possibility of an ISFSI expansion is hypothetical, and not the sort of concrete and certain project that would constitute a proposal before the NRC. If and when NMC applies to the NRC to amend its ISFSI license to add storage capacity, any effects on archeological resources could be considered at that time.

The PIIC's claims regarding expansion of the ISFSI are also inadmissible as a challenge to a Category 1 finding. On-site spent fuel is a Category 1 issue, based on the NRC's generic determination that "[t]he expected increase in the volume of spent fuel from an additional 20 years of operation can be safely accommodated on site with small environmental effects through dry or pool storage at all plants if a permanent repository or monitored retrievable storage is not

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[6] The decision in McGuire/Catawba involved a contention in a license renewal proceeding that the NRC should analyze the cumulative impacts of license renewal and future use of MOX fuel. At the time, Duke had entered into a contract to purchase MOX fuel, but had not applied to the NRC for a license amendment to use such fuel. McGuire/Catawba, CLI-02-14, 55 N.R.C. at 292-93.

[7] While the NRC license authorizes up to 48 storage casks, Minnesota has only authorized 29 casks sufficient to support operation of Units 1 and 2 through the end of their current operating licenses. Northern States Power ("NSP") (the owner of PINGP) has therefore applied to the Minnesota Public Utilities Commission ("MPUC") for a Certificate of Need ("CON") to allow additional casks during the license renewal period. To avoid having to seek multiple approvals from the MPUC, NSP has requested a CON for 39 additional casks sufficient to store all spent fuel that would be generated in the period of extended operation. NMC has not applied to the NRC to increase the current NRC-licensed capacity of the ISFSI.

available." 10 C.F.R. Part 51, Subpart A, App. B, Table B-1. As the Commission ruled in dismissing a similar contention in the Oconee license renewal proceeding:

> Category 1 issues include the radiological impacts of spent fuel and high-level waste disposal, low-level waste storage and disposal, mixed waste storage and disposal, and on-site spent fuel. See Table B-1, Part 51, [Subpart] A, [Appendix] B. The Commission's generic determinations governing onsite waste storage preclude the Petitioners from attempting to introduce such waste issues into this adjudication.

Oconee, CLI-99-11, 49 N.R.C. at 343 (emphasis added).

2. Contention 2: Severe Accident Mitigation Alternatives ("SAMA")

Contention 2, which alleges that the ER improperly uses the MELCOR Accident Consequence Code System 2 ("MACCS2") computer code to calculate the costs of a severe accident at the PINGP site (Petition at 11), is inadmissible because it lacks factual or expert support and fails to demonstrate the existence of a genuine, material dispute with the Application. The Petition's fundamental claim is that the MACCS2 code is "outdated" and that the "analytical framework" of the 1996 Site Restoration study[8] concerning the cost consequences of a plutonium-dispersal accident should be used instead to calculate the costs of a severe accident at PINGP. Such a claim has no supporting basis. It ignores the fact that the MACCS2 code is the widely used, NRC-endorsed standard for severe reactor accident consequence analysis and that the Site Restoration study itself notes the different characteristics of the contamination caused by a plutonium-dispersal accident, to which it applies, from the contamination resulting from a severe reactor accident, to which it does not apply.

As observed by the licensing board in the Pilgrim license renewal proceeding, "MACCS2 is the current standard for performing SAMA analysis." Entergy Nuclear Operations, Inc.

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[8] D. Chanin and W. Murfin, Site Restoration: Estimation of Attributable Costs from Plutonium-Dispersal Accidents, SAND96-957, Unlimited Release, U-502 (May 1996) ("Site Restoration study").

(Pilgrim Nuclear Power Plant), LBP-07-13, 66 NRC 131, 141 (2007). The code's "development was sponsored by the NRC" and NRC SAMA "analyses are customarily prepared using the MACCS2 code." Id. The MACCS2 code is "the current, state-of-the-art computer code for assessing risks associated with postulated severe reactor accidents"[9] and will be used to model offsite consequences and to generate site-specific consequence estimates as part of NRC's State-of-the-Art Reactor Consequence Analyses ("SOARCA").[10] Furthermore, as stated by the Pilgrim licensing board:

> [I]t is necessary for the Staff to take a uniform approach to its review of such analyses by license applicants and for performance of its own analyses, and it would be imprudent for the Staff to do otherwise without sound technical justification. Where, as here, these analyses are customarily prepared using the MACCS2 code, and where this code has been widely used and accepted as an appropriate tool in a large number of similar instances, the Staff is fully justified in finding, after due consideration of the manner in which the code has been used, that analysis using this code is an acceptable method for performance of SAMA analysis.

Id. (emphasis added). The Pilgrim licensing board therefore rejected, ab initio, a "generalized attack" on the appropriateness of using the MACCS2 code to calculate severe accident cost consequences because of insufficient legal and factual bases to support the claim. Id. at 142-143.[11]

This Licensing Board should similarly reject Contention 2 for insufficient basis to demonstrate the existence of a genuine, material dispute with the Application. As previously

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[9] See Generic Environmental Impact Statement Vol. 2, NUREG-1437, 5.3.3.2.2 (Apr. 1996) ("GEIS").

[10] The SOARCA is the NRC's ongoing project to estimate the possible public health and safety consequences in the unlikely event of a severe commercial nuclear power plant accident releasing radioactive material into the environment. The results from this project are intended to replace NUREG/CR-2239 "Technical Guidance for Siting Criteria Development" (1982). The SOARCA project "will use state-of-the-art information and calculation tools to develop best estimate radioactive material released into the environment based on the reactor/containment classes and assess those releases to determine best estimate offsite radiological consequences including uncertainties in those results." As stated, the MACCS2 code will be an integral part of the state-of –the-art SOARCA project "to model offsite consequences" and "to generate site-specific consequence estimates." See http://www.nrc.gov/about-nrc/regulatory/research/soar/overview.html.

[11] See also Entergy Nuclear Operations, Inc. (Pilgrim Nuclear Power Station), LBP-06-23, 64 N.R.C. 257 (2006).

stated, the subject of the Site Restoration study is the cost of cleaning up after a plutonium-dispersal accident, i.e., the dispersion of plutonium following an accident (not an explosion) involving nuclear weapons. Decontamination therefore involves the clean-up of plutonium from the environment, and not the clean-up of the different fission products that would be involved in a severe reactor accident. The PIIC provides no expert of factual support for its assertion that the Site Restoration "study's methodology and conclusions to estimate decontamination costs are directly applicable to the SAMA analysis in the ER." Petition at 12 (emphasis added). No expert affidavit or factual reference is proffered to support the claim that the clean-up methodology for plutonium dispersal accidents is applicable to the clean-up following a severe reactor accident.

Furthermore, a review of the Site Restoration study itself demonstrates its irrelevance here.[12] The Site Restoration study underscores at page 5-7 (which the Petition specifically references at 12-13) the inapplicability of the study to the clean-up and decontamination of radioactive fission products. The Site Restoration study states there as follows:

> Very few experiments have been conducted under conditions that approximate those of the accidents under consideration. The vast majority of the available data is focused on nuclear explosions or reactor accidents where chemistry, mass loadings, and particle size differs greatly from what would be expected in a plutonium-dispersal accident.

Site Restoration study at 5-7 (emphasis added). Thus, the Site Restoration study distinguishes the loadings and particle sizes resulting from a plutonium-dispersal accident from those involved

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[12] It is well established that, in determining the admissibility of a contention, licensing boards are to "carefully examine[]" documents provided in support of a contention to determine whether they "supply an adequate basis for the contention." See, e.g., Dominion Nuclear North Anna, LLC (Early Site Permit for North Anna ESP Site), LBP-04-18, 60 N.R.C. 253, 265 (2004). A document put forth by a petitioner as the basis for a contention is subject to Board scrutiny, both as to the portions that support the petitioners' assertions and those that do not. See, e.g., Virginia Electric & Power Co. (Combined License Application for North Anna Unit 3), LBP-08-15, 68 N.R.C. __, slip op. at 49 n.207 (Aug. 15, 2008); Yankee Atomic Electric Co. (Yankee Nuclear Power Station), LBP-96-2, 43 N.R.C. 61, 90 and n.30 (1996). See also id. at 88-89 (rejecting a contention where the document referenced by petitioner on its face failed to establish a disputed material issue).

in a severe reactor accident, and therefore makes it clear that its methodology is inapplicable to severe reactor accidents. The Petition provides no basis to suggest otherwise.

The Petition's reference to statements in Section 2 of the Site Restoration study is similarly inapposite. The statement in the study quoted in the Petition, that "[d]ata on recovery from nuclear explosions that have been publicly available since the 1960s appear to have been misinterpreted, which has led to long-standing underestimates of the potential economic costs of severe reactor accidents" (Petition at 13, quoting Site Restoration study at 2-10) is inapplicable to the PINGP SAMA analysis. The statement refers to an assumption used in WASH-1400 for the use of a decontamination factor ("DF") of 20 for "large scale urban areas." Study at 2-9. However, unlike Indian Point, where a similar contention was admitted, there is no large-scale urban area next to the PINGP, therefore the referenced statement is not pertinent here.

Furthermore, this criticism was directed at the WASH-1400 analysis, performed in the mid-1970s, and not at the MACCS2 code as currently applied. Nowhere does the Site Restoration study criticize the MACCS2 code as endorsed by the NRC and applied in the many license renewals that have been approved and issued by the NRC. Indeed, the MACCS2 code, utilized for the PINGP SAMA analysis, is Version 2 of the MELCOR Accident Consequences Code, endorsed by the NRC in 1998. Furthermore, it was applied using the "Code Manual for MACCS2: User's Guide" that was issued as a 1997 Sandia report. ER, Section 4.17.1 at 4-58; ER, Attachment F at F.1-1, F.3-1, and F.11-3. One of the co-authors for the 1997 User's Guide is also a co-author of the 1996 Sandia Site Restoration study. See ER, Attachment F at F.11-3.

Hence, the Petition's claim that the MACCS2 code as applied in the PINGP SAMA analysis is outdated is contradicted by the information in the PINGP LRA. Version 2 of the code was used, as endorsed by the NRC in 1998, and the code's user manual post-dates the 1996 Site

Restoration study. Indeed, as noted above, the MACCS2 is state of the art code for modeling off-site consequences of a severe accident and is being used as part of the NRC's currently ongoing "state-of –the-art" SOARCA project to model off-site consequences.

Furthermore, both the 1997 MACCS2 Code Manual and the 1996 Site Restoration study were issued as approved Sandia documents, with one of the authors being the same for both documents. The Petition provides no explanation how the Sandia 1997 MACCS2 Code Manual could be outdated based on information in the 1996 Sandia Site Restoration study. Hence, it fails to establish the existence of a genuine, material dispute of fact with the Application as required by 10 C.F.R. § 2.309(f)(1)(vi).[13]

In summary, the PIIC provides no information indicating that use of the MACCS2 code is inappropriate or unreasonable. The Petition provides no factual or legal basis to replace this widely used and accepted code for SAMA analysis with the "analytical framework" and "economic model" of the Site Restoration study (Petition at 11 and 14), which by its very terms is inapplicable to severe reactor accidents. Contention 2 is therefore inadmissible.

3. Contention 3: Endangered and Threatened Species

Contention 3, which alleges that analysis in the ER of endangered and threatened species is inadequate with respect to the Higgins eye pearlymussel and the impacts of transmission lines on avian species (Petition at 14), is inadmissible. Contention 3 fails to address pertinent

[13] In passing, the Petition asserts that the PINGP SAMA analysis must account for economic impacts on the PIIC. See Petition at 13. However, the Petition points to no alleged deficiency in the Application and does not provide any supporting factual basis for any such claims. As discussed in the ER, the PINGP SAMA analysis used the MACCS2 Code with current census data to estimate offsite economic loss, including the loss of both farm and non-farm value, within a 50-mile radius. ER at F.3-2 to F.3-3. The PIIC provides no information that would indicate that economic impacts are not encompassed by this analysis. Further, if the PIIC is suggesting that information more specific to the Treasure Island Casino and Resort should be used in the analysis, it should be noted that the PIIC does not make this information publicly available.

information in Application, and thus fails to present any genuine dispute with the Application. Further, it is not supported by any basis demonstrating a material issue.

a. Higgins Eye Pearlymussel

The PIIC first alleges that the impacts to the Higgins eye pearlymussel are not discussed in Section 4.3 of the ER. Petition at 15. This allegation does not raise a genuine dispute with the Application because it simply focuses on the wrong section of the ER. Section 4.3 of the ER addresses the impacts of entrainment in accordance with 10 C.F.R. § 51.53(c)(3)(ii)(B), and does not relate to the requirements in 10 C.F.R. § 51.53(c)(3)(ii)(E) which the PIIC cites in its Contention (see Petition at 14). The impacts of license renewal on threatened and endangered species is addressed in Section 4.7 of the ER.

Further, any allegation that Section 4.3 of the ER must analyze the impacts of entrainment on the Higgins eye pearlymussel is an impermissible challenge to the NRC rules. 10 C.F.R. § 51.53(c)(3)(ii)(B) provides:

> (B) If the applicant's plant utilizes once-through cooling or cooling pond heat dissipation systems, the applicant shall provide a copy of current Clean Water Act 316(b) determinations and, if necessary, a 316(a) variance in accordance with 40 CFR part 125, or equivalent State permits and supporting documentation. If the applicant can not provide these documents, it shall assess the impact of the proposed action on fish and shellfish resources resulting from heat shock and impingement and entrainment.

As the Commission has made clear, this provision gives a renewal applicant two options: either (1) to provide a Clean Water Act determination or equivalent state permits, or (2) to evaluate the impacts. Entergy Nuclear Operations, Inc. (Vermont Yankee Nuclear Power Station), CLI-07-16, 65 N.R.C. 371, 384-85 (2007). As the Commission has held, section 511(c) of the Clean Water Act does not permit the NRC to make an independent determination or look behind the NPDES permitting agency's determination. Id. at 387. Accord Entergy Nuclear Operations, Inc.

(Indian Point Nuclear Generating Station, Units 2 and 3), LBP-08-13, 68 N.R.C. ___, slip op. at 137-41 (July 31, 2008). "By holding a valid SPDES permit, Entergy has met its specific obligations by providing in its ER the 'equivalent state permits and supporting documentation' required by the NRC Regulations." Id. at 139.

Here, The ER identifies the current Section 316(b) determination for Prairie Island and provides the relevant portions of the documentation. ER at 4-12 to 4-18, and App. B. The PIIC does not dispute this. Accordingly, its allegation that Section 4.3 of the ER must analyze the impact of entrainment on the Higgins eye pearlymussel is a challenge to 10 C.F.R. § 51.43(c)(ii)(B), which is barred by 10 C.F.R. § 2.335.

The PIIC's next claim, that Section 4.7 contains insufficient information, ignores pertinent information in that Section. Further, the PIIC provides no basis – no expert opinion, reference, or other source – indicating that there is any significant effect requiring further analysis.

Section 4.7 of the ER states:

> The life cycle of *L. higginsii* is complicated, with sessile adults releasing planktonic larvae (known as glochidia) that are parasitic, attaching to the gills of fish (FWS 2004a). Glochidia develop on the gills of host fish for several weeks and drop off as juveniles, ultimately settling on suitable substrate and (if successful) growing into adults. In the genus *Lampsilis*, the mantle of the female grows into a ribbon-like appendage that resembles a minnow and is believed to have evolved to attract fish hosts (FWS 2004a). Females are known to expel glochidia in the presence of these fish, increasing the likelihood that they will attach to fish gills and survive (FWS undated). Sauger, walleye, yellow perch, largemouth bass, smallmouth bass, and freshwater drum all serve as hosts for Higgins eye glochidia (FWS 2004b). When glochidia are released into the water column in the absence of fish, survival is greatly reduced.
>
> State (MN DNR) and federal (FWS and USACE) agency partners determined that the area 0.5 mile north of the PINGP intake was suitable area for the relocation of *L. higginsii*, notwithstanding the fact that it was a short distance upstream of the plant's intake. Sub-adult *higginsii* planted upstream of the PINGP intake

> screenhouse in 2003 reached adulthood (sexual maturity) in 2005 (FWS 2006a) and are assumed to be releasing glochidia into Sturgeon Lake. It is conceivable that some larval *higginsii* will be carried downstream into the power plant's intake screenhouse. It should be noted, however, that mortality rate of early life stages of mussels is very high under the best of circumstances, and glochidia that do not attach to fish hosts soon after being released have a very low probability of survival.

ER at 4-25. Thus, the PIIC's assertion that "[n]o information, relative to impacts, other than the statement that 'some larval higginsii will be carried downstream into the power plant's intake screen house' is provided" (Petition at 16) is incorrect.[14] More importantly, the discussion in the ER establishes that (1) the federal and State agencies reintroducing the Higgins eye pearlymussel into Pool 3 and 4 of the Mississippi River have determined that the area is suitable for the species notwithstanding the intake downstream, and (2) while it is conceivable that some larvae could be carried downstream to the intake, such larvae would not be expected to be viable because they only survive if they attach to the gills of a fish soon after being released. Thus, contrary to the PIIC's allegation, Section 4.7 does provide the basis for the conclusion that license renewal is not expected to jeopardize the existence of any threatened or endangered species (ER at 4-27). The PIIC does not address this information and provides no basis to dispute these conclusions.

b. Impacts of Transmission Lines on Avian Species

The PIIC's allegations related to the impacts of transmission lines are inadmissible because they seek to raise a Category 1 issue that has been resolved generically by rule. 10 C.F.R. Part 51, Subpart A, App. B, Table B-1 designates "Bird collision with power lines" as a Category 1 issue and finds that such "[i]mpacts are expected to be of small significance at all sites." This finding is in turn based on the evaluation in Section 4.5.6.2 of the GEIS, which

[14] Moreover, the ER states that "[i]t is conceivable" that some larval could be carried downstream to the intake. ER at 4-25. Thus, the PIIC's quotation is incomplete.

specifically considered the impacts of bird collisions with power lines at PINGP (GEIS at 4-77) and concludes:

> Based on (1) the fact that existing literature does not show significant impacts of collision mortality on overall species populations and (2) the lack of known instances where nuclear-plant lines are affecting large numbers of individuals in local areas, the staff concludes that the mortality resulting from bird collisions with transmission lines associated with license renewal and an additional 20 years of operation will not cause long-term reduction in bird populations and thus will be of small significance. Further, little potential for significance due to cumulative impacts is indicated. Finally, the modification of transmission lines would not be warranted because the impact is so small and such mitigation measures would be costly. This is a Category 1 issue.

GEIS at 4-77 to 4-88.

The PIIC does not identify any new and significant information that would warrant reconsideration of the generic Category 1 finding. Instead, the PIIC simply refers to a background section of the ER which summarized the evaluation in the GEIS. See ER at 3-13. Further, the PIIC has made no request for a waiver necessary to litigate a Category 1 finding. See 10 C.F.R. § 2.335. Entergy Nuclear Operations, Inc. (Vermont Yankee Nuclear Power Station & Pilgrim Nuclear Power Station), CLI-07-3, 65 N.R.C 13, 17-18 & n.15, reconsid. denied, CLI-07-13, 65 N.R.C. 211 (2007), aff'd sub nom, Massachusetts v. NRC, 522 F.3d 115 (1st Cir. 2008). See also Turkey Point, CLI-01-17, 54 N.R.C. at 12. "The NRC's procedural rules are clear: generic Category 1 issues cannot be litigated in individual licensing adjudications without a waiver." Massachusetts v. NRC, 522 F.3d at 127.

Further, the discussion in 4.5.6.2 of the GEIS, which is summarized in Section 3.1.6.3 of the ER, does not relate to threatened or endangered species. None of the species identified in the GEIS's discussion of the PINGP study are threatened or endangered. Compare GEIS at 4-77 with ER at Table 2.3-1. Further, the PIIC does not identify any basis – any expert opinion,

reference, or other source – indicating that threatened or endangered species are being impacted by transmission lines associated with PINGP.

Instead, the PIIC simply refers to species that use the upper Mississippi as a flyway (Petition at 17-18), and to the Vermillion River and Lower Cannon River Important Bird Area (id. at 19). The PIIC does not identify any threatened or endangered species in these areas that are likely to be affected by transmission lines.[15] The PIIC merely "believes that because of PINGP's location within the Mississippi River flyway and the past high incidence of avian mortalities, there is a possibility that threatened or endangered species may be impacted by continued operation of the plant." Petition at 19 (emphasis added). Such speculation unsupported by any specific expert opinion or facts does not establish the existence of a genuine material dispute with the Application. McGuire, CLI-03-17, 58 N.R.C. at 424 ("The Rules of Practice bar contentions where petitioners have what amounts only to generalized suspicions . . .") (internal quotations omitted).

Last, but by no means least, the PIIC never explains how license renewal will have any impact on avian mortality. The ER indicates that the transmission lines associated with PINGP are integral to the larger transmission system and will be maintained indefinitely, even after PINGP is decommissioned. ER at 3-13.[16] Since operation and maintenance of the transmission

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[15] The PIIC refers to the Red-Shouldered Hawk and to the Cerulean Warbler. Petition at 19. As Table 2.3.1 of the ER shows, neither of these species is listed as threatened or endangered (though they are identified by Minnesota as a species of special concern). It should be noted that 10 C.F.R. § 51.53(c)(3)(ii)(E) requires an assessment of the impact on threatened and endangered species "in accordance with the Endangered Species Act" (i.e., federally listed species). As Table 2.3.1 of the ER shows, no federally listed threatened or endangered species has been identified in the vicinity of PINGP or its associated transmission lines.

[16] As the ER also states (and the PIIC acknowledges), an Avian Protection Plan for Xcel Energy's transmission lines is in development. ER at 3-13; Petition at 20. The development of this plan is proceeding in accordance with the Memorandum of Understanding with the U.S. Fish and Wildlife Service.

lines will continue irrespective of license renewal (ER at 4-27), any impact of the transmission lines on avian species has no causal connection to license renewal.[17]

4. Contention 4: Health Impacts

Contention 4, which questions whether "the Environmental Report sufficiently assesses the health effects of radionuclide emissions from the PINGP" (Petition at 20), is inadmissible because it is beyond the scope of this proceeding and is a challenge to the license renewal rules. Contention 4 seeks to raise a Category 1 environmental issue that cannot be raised absent a waiver of the rules by the Commission. Even if Contention 4 were within the scope of the proceeding, it would be inadmissible because it lacks any basis demonstrating the existence of a genuine material dispute.

Contention 4 represents a challenge to the scope of the environmental review specified in 10 C.F.R. § 51.53(c), and to the NRC's generic environmental findings in the GEIS and Appendix B to 10 C.F.R. Part 51. Offsite radiological impacts (i.e., individual effects from other than disposal of spent fuel and high-level waste) are Category 1 issues determined to have small effects, based on a generic finding in the GEIS. 10 C.F.R. Part 51, App. B, Table B-1. Thus, as the Commission has held, radiological exposure from power reactor operation is a Category 1 issue, and such a contention is not litigable. Turkey Point, CLI-01-17, 54 N.R.C. at 17. Therefore, Contention 4 must be excluded from consideration in this proceeding.

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[17] NEPA requires consideration only of "the environmental impact of the proposed action" (42 U.S.C. § 4332(C)(i)), and this provision has been interpreted as requiring a reasonably close causal relationship between the proposed action and an alleged environmental effect or impact – similar to proximate cause in tort law -- before that effect need be considered. Metropolitan Edison Co. v. People Against Nuclear Energy, 460 U.S. 766, 773-74 (1983). The Council on Environmental Quality ("CEQ") regulations also define the effects that must be considered in an EIS as those "which are caused by the action." 40 C.F.R. § 1508.8. Consequently, NEPA does not require an evaluation of effects that will be unaffected by the proposal. Burbank Anti-Noise Group v. Goldschmidt, 623 F.2d 115, 116-17 (9th Cir. 1980), cert. denied, 450 U.S. 965 (1981) ("An EIS is not required, however, when the proposed federal action will effect no change in the status quo").

The PIIC's assertion that there is new and significant information regarding cancer incidence (Petition at 20) does not bring this Contention within the scope of the proceeding. As previously discussed, a petitioner who believes that new and significant information alters a generic finding must seek a waiver from the Commission. "The NRC's procedural rules are clear: generic Category 1 issues cannot be litigated in individual licensing adjudications without a waiver." Massachusetts v. NRC, 522 F.3d at 127. The PIIC has not sought a waiver. As the Commission has held, "[a]djudicating Category 1 issues site by site based merely on a claim of 'new and significant information' would defeat the purpose of resolving generic issues in a GEIS." Vermont Yankee and Pilgrim, CLI-07-03, 65 N.R.C. at 21.

Moreover, the PIIC does not allege that there is any "special circumstances with respect to the subject matter of the particular proceeding" that would warrant a waiver. 10 C.F.R. § 2.355 (emphasis added). The PIIC does not identify any study of cancer incidence specific to PINGP, or any document indicating that there is a special circumstances particular to PINGP that would make the NRC's category 1 finding inapplicable. Thus, even if the PIIC had sought a waiver (which it did not), its contention would be inappropriate.[18]

Further, even if this Contention were within the scope of the proceeding, which it is not, it would be inadmissible because it is not supported by a basis demonstrating the existence of a genuine material dispute. None of the discussion in the PIIC's Contention 4 supports the

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[18] As the Commission has stated:

> The Commission recognizes that even generic findings sometimes need revisiting in particular contexts. Our rules thus provide a number of opportunities for individuals to alert the Commission to new and significant information that might render a generic finding invalid either with respect to all nuclear power plants or for one plant in particular. In the hearing process, petitioners with new information showing that a generic rule would not serve its purpose at a particular plant may seek a waiver of the rule. See 10 C.F.R. § [2.355] . . . Petitioners with evidence that a generic finding is incorrect for all plants may petition the Commission to initiate a fresh rulemaking.

Turkey Point, CLI-01-17, 54 N.R.C. at 12 (emphasis added).

existence of new and significant information that would alter the Commission's generic, Category 1 finding.

In particular, the Joseph Mangano Declaration to which the PIIC refers (Petition at 20) makes allegations specific to the Indian Point nuclear plant.[19] The PIIC makes no attempt to relate its borrowed reference to PINGP. Further, the Atomic Safety and Licensing Board ruled in the Indian Point proceeding that Joseph Mangano's declarations did not demonstrate special circumstances that would warrant site specific consideration of health impacts. Indian Point, LBP-08-13 at 195, 224.

Similarly, the PIIC makes no showing that the British, Spanish and German studies cited in the Petition (at 21) would alter the assessment in the GEIS.[20] The PIIC provides no information indicating that these studies would change the risk estimates used in the GEIS. Indeed, the PIIC provides no real discussion of the results of these studies at all. Nor does the PIIC provide any expert opinion or other basis indicating that these studies are reliable.

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[19] There were two declarations provided by Joseph Magano in the Indian Point proceeding. Declaration of Joseph J. Mangano (Nov. 30, 2007) attached to Connecticut Residents Opposed to the Relicensing of Indian Point and its Designated Representative's Petition to Intervene and Request for Hearing (Dec. 10, 2007), available at ADAMS Accession No. ML073520597; J. Mangano, "Public Health Risks of Extending Licenses of the Indian Point 2 and 3 Nuclear Reactors" (Dec. 7, 2007), attached to Hudson River Sloop Clearwater Inc.'s Petition to Intervene and Request for Hearing (Dec. 10, 2007), available at ADAMS Accession No. ML073520042. It is unclear which of these documents the PIIC is attempting to reference, but both relate specifically to Indian Point.

[20] Indeed, the Summary of the KiKK study available on the German Federal Office for Radiation Protection website concludes:

> The present study confirms that in Germany there is a correlation between the distance of the home from the nearest NPP at the time of diagnosis and the risk of developing cancer (respectively leukaemia) before the 5th birthday. This study is not able to state which biological risk factors could explain this relationship. Exposure to ionising radiation was neither measured nor modelled. Although previous results could be reproduced by the current study, the present status of radiobiologic and epidemiologic knowledge does not allow the conclusion that the ionising radiation emitted by German NPPs during normal operation is the cause. This study can not conclusively clarify whether confounders, selection or randomness play a role in the distance trend observed.

Epidemiological Study on Childhood Cancer in the Vicinity of Nuclear Power Plants (KiKK-Study) at 19, available at http://www.bfs.de/de/bfs/druck/Ufoplan/4334_KIKK_Zusamm.pdf (English Version begins on page 13 of this Summary).

The PIIC's reference to studies on cancer incidence rates in Native Americans similarly fails to present any information that would warrant reconsideration of the generic findings in the GEIS. These studies do not relate to the health effects of radiation, and do not relate to the health effects of populations in the vicinity of a nuclear plant.[21] The PIIC provides no study, data, or expert opinion indicating that there is any elevated incidence of cancer in the vicinity of PINGP.[22]

Finally, the PIIC asserts that the BEIR VII committee endorses the linear no-threshold ("LNT") dose-response relationship. Petition at 24. However, NRC regulations have consistently been based on LNT. The NRC's Standards for Protection Against Radiation, in 10 C.F.R. Part 20, are based on LNT. See 56 Fed. Reg. 23,360 (May 21, 1991). Furthermore, the GEIS applied a 4 x 10^{-4} risk coefficient without any threshold in assessing the impacts of license renewal. See, e.g., GEIS at 4-98 and E-31 to E-32. Thus, BEIR VII provides no basis to alter the generic, Category 1 findings in the GEIS.

5. Contention 5: Environmental Justice

Contention 5, which alleges that the ER does not adequately assess the impacts of PINGP on the adjacent minority population (Petition at 24), is inadmissible as an impermissible challenge to the NRC rules. Contention 5 is also inadmissible because it is not supported by any basis demonstrating a genuine material issue.

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[21] As previously noted, a document put forth by a petitioner as the basis for a contention is subject to Board scrutiny, both as to the portions that support the petitioners' assertions and those that do not. See note 12, supra.

[22] In contrast, the Minnesota Department of Health has conducted an epidemiological study and found that cancer incidence and mortality rates in Goodhue County (in which PINGP is located) are the same as or below the statewide average. Minnesota Department of Health, Cancer Occurrence in Goodhue County, MCSS Epidemiology Report 200:2 (Dec. 2000), available at http://www.health.state.mn.us/divs/hpcd/cdee/mcss/documents/goodhue.pdf .

As previously discussed with respect to Contention 4, offsite radiological impacts are a Category 1 issue determined to have small effects, based on a generic finding in the GEIS. 10 C.F.R. Part 51, App. B, Table B-1. While Contention 5 attempts to repackage Contention 4 as an environmental justice issue, it is still fundamentally an impermissible challenge to the NRC's generic conclusion that offsite radiological impacts are small for all plants. Indeed, as a general matter (absent a Category 1 finding), an environmental justice contention would only be admissible if it alleges, with requisite documentary basis and support, that the proposed action will have "significant adverse impacts on the physical or human environment" that were not considered because the impacts on the community were not adequately evaluated. Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions, 69 Fed. Reg. 52,040, 52,047, 52,048 (Aug. 24, 2004) (emphasis added).[23] Such an allegation (that the proposed action will have significant adverse impacts) is clearly an attack on the NRC's Category 1 finding (that offsite radiological impacts are small for all plants). 10 C.F.R. § 2.335(a) prohibits such an attack by any means.

Further, there is no requirement in the NRC rules for a license renewal applicant to address environmental justice considerations. In particular, 10 C.F.R. § 51.53(c)(3), which defines the content of a license renewal applicant's ER, does not include any provision related to environmental justice. Rather, environmental justice is categorized as "N/A" in Table B-1 to 10 C.F.R. Part 51. While Table B-1 indicates that this issue will be addressed in individual license renewal reviews, the NRC's implementing guidance indicates that it is the NRC Staff that

[23] Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations," 59 Fed. Reg. 7,629 (Feb. 11, 1994), calls for agencies to identify and address "disproportionately high and adverse human health or environmental effects." Id.

performs this review.[24] Regulatory Guide 4.2 Supplement 1, "Preparation of Supplemental Environmental Reports for Applications to Renew Nuclear Power Plant Operating Licenses" (Sept. 2000) at § 4.22 ("The NRC staff will perform the environmental justice review to determine whether there will be disproportionately high human health and environmental effects on minority and low-income populations and report the review in its SEIS.").[25]

Even if Contention 5 were not an impermissible challenge to the NRC rules, it would be inadmissible because it is not supported by information demonstrating the existence of a genuine, material dispute. As previously discussed, an environmental justice contention would be admissible only if it alleged, with requisite documentary basis and support, that the proposed action will have significant adverse impacts on the physical or human environment that were not considered because the impacts the community were not adequately evaluated. 69 Fed. Reg. at 52,047. The PIIC provides no information that would indicate that renewal of the PINGP operating license would cause a "significant adverse impact" on the health of the PIIC residents. The PIIC provides no information indicating that its members would be exposed to any radiation

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[24] 10 C.F.R. § 2.309(f)(2) provides an opportunity to submit contentions later addressing the NRC Staff's environmental impact statement. It should be noted, however, that the PIIC is participating as a cooperating agency in the preparation of the EIS on matters within the PIIC's expertise, including environmental justice. Memorandum of Understanding Between the U.S. Nuclear Regulatory Commission and the Prairie Island Indian Community as a Cooperating Agency (June 14, 2008), ¶ IV.B.1.d, available at ADAMS Accession No. ML0816192730. Therefore, the PIIC will have a direct means of ensuring that its views are considered.

[25] Consequently, Reg. Guide 4.2 Supp. 1 requires only that the ER provide the following information "to assist the staff in its environmental justice review":

> From Chapter 2, provide by political jurisdiction the composition of minority and low-income persons within 80 km (50 miles) of the plant. Migrant workers as well as full time residents should be included. Provide these data by census tract/block for those geographic areas where the potential has been identified in Chapter 4 for adverse impacts from refurbishment and from continued operation during the renewal term. The most recent Bureau of the Census demographic information should be supplemented with demographic information from State and local planning agencies.
>
> Identify in Chapter 4, Chapter 5, and Chapter 6 the geographic location of each environmental impact and proposed mitigating action addressed.

Reg. Guide 4.2, Supp. 1, at § 4.22. The impacts in Chapter 4, 5 and 6 relate only to Category 2 issues or issues where the applicant identifies its awareness of new and significant information.

above permissible limits. Nor does the PIIC provide any information indicating that doses within permissible limits would result in significant adverse impacts.

Instead, the PIIC simply refers to the general cancer studies on Native Americans discussed in Contention 4. As previously discussed, these studies do not relate to the health effects of radiation, and do not relate to the health effects of populations in the vicinity of a nuclear plant. Further, none of these studies indicates that Native Americans are genetically more susceptible to cancer. Indeed, the Annual Report to the Nation on the Status of Cancer, 1975-2004 Featuring Cancer in American Indian and Alaska Natives (2007),[26] which the PIIC cites on page 21 of its Petition, states "Overall, rates for [American Indians/Alaska Natives] were lower than for [Non-Hispanic Whites] from 1999 through 2004 for most cancers. . . ." Similarly, Cancer in Minnesota, 1988-2002,[27] which the PIIC cites at page 21 of its Petition, states: "Nationally, American Indians have the lowest overall cancer rate. . . ." Id. at vii. These studies do indicate that American Indians in Minnesota have a higher rate than other ethnic groups in the State (id. at vii, 23), but states that the majority of the excess in cancer risk among American Indians in Minnesota is due to lung and colorectal cancer. Id. The PIIC provides no basis – no expert opinion, reference, or other source – to suggest that such cancers are attributable to radiation. To the contrary, Minnesota Cancer Facts and Figures 2006,[28] which the PIIC cites on page 22 of its Petition, states that "[a]pproximately 90 percent of lung cancers are caused by tobacco use." Minnesota Cancer Facts and Figures 2006 at 15.

Moreover, the PIIC provides no information that would indicate that its residents have higher than normal cancer incidence. Indeed, because NSP has been providing the PIIC

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[26] Available at http://publichealth.lsuhsc.edu/tumorregistry/PDF/ARN%202007%20Final%20e.pdf.

[27] Available at http://www.health.state.mn.us/divs/hpcd/cdee/mcss/camn2005index.html

[28] Available at http://www.mncanceralliance.org/sites/528d17b0-2c73-45c9-894d-872fc0beac4e/uploads/MN_Facts_and_Figures_2006.pdf

$100,000 per year since July 1, 2003, designated for a health study, emergency management activities, and other Community purposes,[29] the absence of any discussion specific to the PIIC members is presumably indicative of the absence of any observed effect on the health of those members. The PIIC has not furnished any studies, either provided as a result of NSP's funding or performed for any other reason, indicating any increased cancer incidence at the PIIC. In sum, the PIIC does not any basis to suggest that its members will suffer disproportionately high and adverse heath effects attributable to the extended operation on PINGP.

6. Contention 6: Coatings Inside Containment

Contention 6, which alleges that the Application fails to include a plan to manage the aging of containment coatings (Petition at 26), is inadmissible because it does not present a genuine dispute with the Application. The gravamen of this Contention is that, while the Application indicates that coatings inside containment are not credited with any intended function that must be maintained under the license renewal rule,[30] NMC's response to Generic Letter 2004-02, Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors (Sept. 13, 2004) ("GL 2004-02") indicates that the containment inservice inspection program provides a means to check the condition of coatings as a potential source of debris that could block the sump recirculation strainers. Petition at 36. That NMC takes steps to reduce potential sources of debris is irrelevant, because the analysis performed in response to Generic Letter 2004-02 (demonstrating that debris will not

[29] NSP provides the PIIC with $2.25 million per year as part of a settlement of a prior case before the Minnesota Public Service Commission to obtain a certificate of need for the Independent Spent Fuel Storage Installation at PINGP. Of this amount, $100,000 is designated for a health study, emergency management activities, and other Community purposes.

[30] The Application explains that coatings inside containment do not have an intended function (defined in 10 C.F.R. § 54.4) because (1) they are not credited either to assure the function of coated structures or components, and (2) their contribution to containment debris [potentially affecting sump performance] is event driven and not related to aging. Application at 2.1-8.

prevent safety related equipment from performing its intended function) assumes that coatings inside containment fail. Therefore, coatings inside containment do not fall within the scope of 10 C.F.R. § 54.4(a)(2). The PIIC provides no meaningful discussion of NMC's response to Generic Letter 2004-02, and presents no information demonstrating that the Application is wrong.

Generic Letter 2004-02 established certain requirements to address the potential impact of debris blockage on emergency recirculation during design basis accidents at pressurized water reactors ("PWRs"). As explained in the Generic Letter, a high-energy line break inside containment would impinge upon the materials in the vicinity of the break, generating debris. Additional debris (including disbanded coatings) could also be created by the accident conditions, flooding and containment spray. This debris could be transported to, and form a debris bed over, the recirculation sump screen. If a sufficient amount of debris were to accumulate, it could result in a loss of net positive suction head ("NPSH") to the emergency core cooling system ("ECCS") or containment spray systems ("CCS") taking suction from the sump. See GL 2004-02 at 3-4.

To address this issue, Generic Letter 2004-02 required, inter alia, that each PWR licensee perform an analysis of the susceptibility of the ECCS and CSS recirculation functions to the adverse effects of post-accident debris blockage and operation with debris-laden fluids. GL 2004-02 at 10. In essence, under the baseline methodology approved by the NRC, this analysis consists of (1) identifying break size and location that will result in debris generation that will result in maximum head loss across the sump screen; (2) determining the volume and characteristics of the generated debris; (3) determining the amount of debris that will be transported to the sump screen; and (4) calculating the head loss from the debris bed that could

form on the sump screens. NEI-04-07, Pressurized Water Sump Performance Evaluation Methodology (Rev. 0, Dec. 2004), Ch. 3.

As previously stated, the analysis that NMC has performed in response to GL 2004-02 assumes that coatings inside containment will fail and become debris. In particular, NMC's analysis assumes that (1) all qualified coatings within the zone of influence of the worst case pipe break fail, and (2) all unqualified coatings inside containment fail.[31] Moreover, under NRC guidance, unqualified coatings include any degraded qualified coatings.[32] The estimated quantity of debris from degraded qualified coatings is based on plant-specific data.[33] As reflected in NMC's response to GL 2004-04, containment walkdowns were performed to quantify the potential debris sources.[34] Further, NMC implements a latent debris monitoring program to confirm that the volume of debris assumed in the GL 2004-02 analysis (including the volume of coatings assumed to fail) remains conservative.[35]

Thus, the analysis that is part of the CLB for PINGP (1) assumes that coatings fail, (2) assumes that degradation of qualified coatings occurs, and (3) demonstrates that such failed coating (along with other debris that would be generated by a pipe break) would not prevent safety-related equipment from performing its safety function. Thus, coatings do not meet the

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[31] Supplemental Response to Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors" for the Prairie Island Nuclear Generating Plant (Feb. 28, 2008) at 8, available at ADAMS Accession No. ML080590629. While only coatings qualified for post accident conditions are applied inside of containment, some components are provided by equipment manufacturers with coatings that are not qualified. See id. at 3.

[32] Safety Evaluation by the Office of Nuclear Reactor Regulation Related to NRC Generic Letter 2004-02, Nuclear Energy Institute Guidance Report (Proposed Document Number NEI-04-07), Pressurized Water Reactor Sump Performance Evaluation Methodology"(Dec. 2004) at 23, available at ADAMS Accession Nos. ML043280631 and ML043280007 ("Degraded 'qualified' coatings that have not been remediated should be treated as unqualified coatings.").

[33] Id. at 23.

[34] Nuclear Management Company Response to Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors" for the Prairie Island Nuclear Generating Plant (Aug. 31, 2005) at 3-4, 9, available at ADAMS Accession No. ML052440054.

[35] Supplemental Response to Generic Letter 2004-02, note 31 supra, at 56.

definition in 10 C.F.R. § 54.4(a)(2) (i.e., they are not components whose failure could prevent satisfactory accomplishment of safety functions).

GL 2004-02 also required PWR licensees to describe existing or planned programmatic controls that will ensure that potential sources of debris introduced into containment will be assessed for potential adverse effects on the ECCS and CSS recirculation functions. GL 2004-02 at 11. In response to this portion of the Generic Letter, NMC stated that it conducts a periodic assessment of the condition of coatings inside containment which minimizes the amount of qualified coatings that may be susceptible to detachment from the substrate during a loss of coolant accident ("LOCA") event.[36] That NMC takes steps to minimize debris that may be generated during a LOCA in no way implies that the coatings assessment program is credited as preventing coatings from failing, or that absent such a program, the failure of coatings would prevent safety-related equipment from performing its intended function.

The PIIC provides no meaningful discussion of the analysis that NMC has performed in response to GL 2004-02. It does not provide any information indicating that the failure of coatings in the PINGP containment would prevent safety-related equipment from performing its function. The PIIC's sole reference to the condition assessment program is not supported by any information explaining how that program is relied upon. In particular, the PIIC provides no basis – no expert opinion, reference, or other source – indicating that the condition assessment program for coatings is relied upon to prevent safety-related equipment from failing. Thus, the PIIC provides no information demonstrating a genuine, material dispute with the Application.

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[36] Id. at 25.

7. Contention 7: Reactor Vessel Embrittlement

Contention 7, which alleges that the Application does not include an adequate plan to monitor and manage the embrittlement of the reactor vessel and internals (Petition at 27), is inadmissible because it fails to address the programs that are described in the Application. Further, Contention 7 is inadmissible because it is not supported by any information that would indicate a deficiency in the programs described in the Application. Instead, the PIIC simply parrots assertions from the Indian Point proceeding, without making any real attempt to address the PINGP Application.

Reactor Vessel Neutron Embrittlement is a time-limited aging analysis ("TLAA") that is addressed comprehensively in Section 4.2 of the Application. That Section demonstrates that the PINGP will meet the fracture toughness requirements set forth in 10 C.F.R. § 50.60 and Part 50 Appendices G and H throughout the period of extended operation. In particular, the Application shows that the upper-shelf energies for beltline forgings and welds at 54 effective full power years ("EFPY"), which correspond to 60 years of operation, are all above 50 ft-lb criterion specified in 10 C.F.R. Part 50, App. G. Application at 4.2-3 to 4.2-4. The Application also shows that that the reactor vessel will meet the screening criteria in the pressurized thermal shock ("PTS") rule throughout the period of extended operation.[37] Application, § 4.2.3. In particular, the Application shows that the projected RT_{PTS} for plates, forgings, axial welds, and circumferential welds at 54 EFPY are all below the screening criterion determined in accordance with 10 C.F.R. § 50.61(b)(2). Application at 4.2-6 to 4.2-8. The PIIC does not address or

[37] The screening criteria in the PTS rule are set conservatively and represent a level of embrittlement at which there can be a reasonable assurance that there is no undue risk to health and safety because of potential PTS events. Nuclear Management Co., LLC (Palisades Nuclear Plant), LBP-06-10, 63 N.R.C. 314, 349 & n.144 (2006), citing Final Rule, Analysis of Potential Pressurized Thermal Shock Events, 50 Fed. Reg. 29,037, 29,939 (July 23, 1985).

dispute any of this analysis and thus fails to demonstrate any genuine material dispute with the Application.

Instead, the PIIC simply refers to a declaration of Richard Lahey from the Indian Point proceeding, which alleged that Entergy failed to discuss how embrittled reactor vessels would respond under severe decompression shock loads associated with a design basis accident loss of coolant accident. Petition at 28. Putting aside the fact that this declaration does not address PINGP and there is no indication whatsoever that Richard Lahey has ever reviewed the PINGP Application, this claim is simply an impermissible challenge to the sufficiency of the reactor toughness requirements in 10 C.F.R. Part 50, App. G and PTS rule in 10 C.F.R. § 50.61. These rules are designed to maintain the ductility of the vessel material within the limits preventing brittle facture from design basis loads. Further, pressurized thermal shock events addressed by 10 C.F.R. § 50.61 include postulated accidents such as small break loss of coolant accidents,[38] main steam line breaks, and feedwater line breaks. 50 Fed. Reg. at 29,938.

In addition to this demonstration that the fracture toughness requirements and PTS limits will be met throughout the period of extended operation, the Application also commits to a Reactor Vessel Surveillance Program (Application, § B2.1.34). This program is consistent with the NRC's Generic Aging Lessons Learned (GALL) Report[39] (i.e., takes no exceptions to the recommendations in the GALL Report), and in fact includes program enhancements to preserve withdrawn and spare surveillance capsules for future use. Application at B-68 to B-69. The

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[38] PTS events involve thermal shocks when the reactor vessel is pressurized. As the NRC evaluation which led to the promulgation of the PTS rule states, "[i]t is noted that the thermal stress alone is not sufficient to cause loss of RPV integrity. The other important stress is due to pressure. Maintaining system pressure relatively high or repressurizing following a cooldown is of primary concern." SECY-82-465, Pressurized Thermal Shock (Dec. 23, 1982), Enclosure A, NRC Staff Evaluation of Pressurized Thermal Shock (Nov. 1982) at G-2. The NRC Staff evaluation indicates that the most limiting break size for PTS concerns is a 2-inch break. Id. at G-14. For larger breaks, the pressure will be lower as a result of the faster time to uncover the break and depressurize the system. Id.

[39] NUREG-1801, Generic Aging Lessons Learned (GALL) Report (Rev. 1 Sep. 2005) ("GALL Report").

PIIC states that "it is not clear from this description whether PINGP Units 1 & 2 have adequate standby surveillance capsules . . ." Petition at 29. The PIIC's uncertainty does not raise any genuine material issue. The PIIC has simply failed to consult the PINGP Updated Safety Analysis Report ("USAR"), which shows that each unit has two spare capsules (four in total). See USAR, § 4.7.2.3 and Table 4.7-11. The PIIC has an ironclad obligation to examine such publicly available documentation with sufficient care to determine if there is a basis for a contention. Final Rule, 54 Fed. Reg. at 33,170 (quoting Catawba, ALAB-687, 16 N.R.C. at 468 (1982). The PIIC provides no basis – no expert opinion, reference, or other source – that would indicate that this number of spare capsules is inadequate.

Additionally, the PIIC alleges that PINGP has not presented any experiments or analysis to justify its statement that embrittled RPV internal structures will not fail and that a coolable core geometry will be maintained for a design basis loss of coolant accident. Petition at 29. There is no provision in the license renewal rules requiring presentation of such experiments or analysis. Nor is there any TLAA[40] applicable to embrittlement of the reactor vessel internals and thus no such TLAA requiring reanalysis pursuant to 10 C.F.R. § 54.21(c). If the PIIC is suggesting that the application must perform analyses beyond the scope of 10 C.F.R. § 54.21(c), its Contention is an impermissible challenge to the sufficiency of the NRC's rules.

Further, the PIIC does not make any showing that reactor vessel internals are subject to "decompression shock loads." The reactor vessel internals are not pressure retaining components.

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[40] Time limited aging analyses that must be addressed in a license renewal application are by definition those analyses that are part of the plant's current licensing basis. See 10 C.F.R. § 54.3.

Finally, it should be noted that the concerns raised by Dr. Lahey in the Indian Point proceeding were predicated on the fact that the Charpy upper shelf energy for certain RPV components at Indian Point fell below the 50-ft pound limit established in 10 C.F.R. Part 50, App. G. See Declaration of Dr. Richard T. Lahey, Jr. (Nov. 2007), ¶¶ 18-19, available at ADAMS Accession No. ML073400193. In contrast, the PINGP Application demonstrates that the upper shelf energy will remain above the 50-ft pound limit. See Application at 4.2-4 to 4.2-5 (Tables 4.2-2 to 4.2-3). Thus, Dr. Lahey's Declaration has no relevance to PINGP.

8. Contention 8: Nickel Alloy Components

Contention 8 asserts: "The program for managing primary stress corrosion cracking for nickel-alloy components fails to comply with 10 C.F.R. § 54.21(a)(3)." Petition at 30. This Contention, which is advanced without factual or expert support, misconstrues the status of the primary stress corrosion cracking program at PINGP and attempts to impose inapplicable requirements on the plant.

The Contention intermixes a discussion of two programs to address primary water stress corrosion cracking ("PWSCC") of nickel-alloy nozzles and penetrations: (1) a specific program to address PWSCC at a particular location – the penetration nozzles welded to the upper reactor vessel head – which is addressed in Section B2.1.28 of the Application; and (2) a general program, still under development by the NRC, with which the Application commits to comply in Section B2.1.27. As explained below, the general program will be an expanded follow-on to the specific program.

In February 2003, the NRC issued an immediately effective order applicable to all PWR licensees modifying their licenses and requiring them to implement a program to inspect and manage the effects of cracking due to PWSCC of the nickel-alloy vessel head penetration

nozzles welded to the upper reactor head. EA-03-009, "Issuance of Order Establishing Interim Inspection Requirements for Reactor Pressure Vessel Heads at Pressurized Water Reactors" (Feb. 11, 2003) ADAMS Accession No.ML030380470, Attachment, Order Modifying Licenses (Effective Immediately) ("EA-03-009 Order").[41] The Order arose from the discovery in 2002 at the Davis-Besse Nuclear Power Station of a cavity in the reactor vessel head near the top of the dome. Id. at 2. The cavity was formed when a nozzle with a through-wall axial crack leaked onto an area of the reactor vessel head that the licensee had left covered with boric acid deposits for several years. Id.

The NRC determined, in light of the Davis-Besse experience, that the current inspection requirements in the ASME Code and related NRC regulations do not provide adequate assurance that reactor coolant pressure boundary integrity will be maintained for all combinations of construction materials, operating conditions, and operating histories at PWRs. The long-term resolution of this issue is expected to involve changes to the ASME Code and amendment to NRC regulations, specifically 10 C.F.R. 50.55a. Id. at 4. Pending the development of new standards and regulations, the NRC decided that it was necessary to impose (via the EA-03-009 Order) a requirement to conduct inspections of the RPV head and its associated penetration nozzles at each refueling outage of a PWR. Id. at 6. The inspections are conducted in accordance with detailed, specific instructions contained in Part IV of the Order. Id. at 6-11.

NMC consented to implementing the EA-03-009 Order, as written, at PINGP (see March 3, 2003 letter L-PI-03-021, ADAMS Accession No. ML030780645) and has since that time

[41] The reactor pressure vessel ("RPV") heads of PWRs have penetrations for control rod drive mechanisms and instrumentation systems. Nickel-based alloys (e.g., Alloy 600) are used in the penetration nozzles and related welds. Primary coolant water and the operating conditions of PWR plants can cause cracking of these nickel-based alloys through a process called PWSCC. The susceptibility of RPV head penetrations to PWSCC appears to be strongly linked to the operating time and temperature of the RPV head. Problems related to PWSCC have therefore increased as plants have operated for longer periods of time. EA-03-009 Order at 1.

incorporated the requirements of the Order, as subsequently modified by the NRC,[42] into the units' current licensing basis ("CLB") as the "Nickel-Alloy Penetration Nozzles Welded to the Upper Reactor Vessel Closure Heads of Pressurized Water Reactors Program" ("Nickel-Alloy Vessel Head Penetration Nozzles Program").[43] Application, § B2.1.28. The Application states that the Nickel-Alloy Vessel Head Penetration Nozzles Program implements the requirements of the EA-03-009 Order, as amended, and "incorporates the susceptibility ranking of the upper vessel head penetration nozzles to PWSCC [primary water stress corrosion cracking], and the required process for establishing the inspection methods and inspection frequencies in accordance with the susceptibility ranking, as required by the Order, as amended." Id.[44]

Contention 8 references the Nickel-Alloy Vessel Head Penetration Nozzles Program described in the Application (Petition at 30-31) but does not allege any specific deficiencies. Therefore, Contention 8 does not show that a genuine dispute exists with NMC on a material issue of law or fact with respect to that program and does not assert an admissible contention regarding it. 10 C.F.R. § 2.309(f)(1)(vi).

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[42] In February 2004, the NRC revised the EA-03-009 Order to somewhat relax certain aspects of the inspections it requires. Issuance of Revised NRC Order EA-03-009 Establishing Interim Inspection Requirements for Reactor Pressure Vessel Heads at Pressurized Water Reactors, ADAMS Accession No. ML040220181 ("EA-03-009 Revision").

[43] The CLB for PINGP has been defined in accordance with the provisions of 10 C.F.R. § 54.3. The CLB includes the USAR, Technical Specifications, and the commitments contained in docketed licensing correspondence with the NRC which are in effect. Application, § 2.1.1.1.1.

[44] On September 10, 2008, the Commission published amendments to 10 C.F.R. § 50.55a incorporating inspection requirements equivalent to those imposed in EA-03-009. Final Rule, Industry Codes and Standards; Amended Requirements, 73 Fed. Reg. 52,730, 52,472 (Sept. 10, 2008). In the supplemental information published with these amendments, the Commission states:

> For new or current license renewal applicants, they may reference conformance with GALL AMP XI.M11A and compliance with the new augmented inspection requirements in paragraphs 10 CFR 50.55a(g)(6)(ii)(D) and (E) without the need for taking an exception to the program elements in GALL AMP XI.M11A.

73 Fed. Reg. at 52,743. Thus, any challenge to the sufficiency of the aging management program for nickel alloy penetration nozzles welded to the pressure vessel head is also barred because it now constitutes an impermissible challenge to the NRC rules.

The NRC also announced in the EA-03-009 Order that it was developing a long-term program to assure that the reactor coolant pressure boundary would be maintained against the risk of PWSCC. EA-03-009 Order at 4. This long-term program includes "research [towards] increasing our understanding of material performance, improving inspection capabilities, and supporting assessments of the risks to public health and safety associated with potential degradation of the RPV head and associated penetration nozzles." Id. The long-term program will involve making changes to the American Society of Mechanical Engineers ("ASME") Code and to the NRC regulations, specifically 10 C.F.R. § 50.55a. Id. Development and implementation of this program, including the ASME Code revisions and the changes to the NRC regulations, "will take several years." Id. at 5.[45]

Similarly, the NRC announced in NRC Bulletin 2003-02,

> The NRC staff is working with the industry and other stakeholders to revise the ASME Code and NRC regulations to address inspection of RCPB [reactor coolant pressure boundary] locations susceptible to cracking, including RPV penetrations. These activities will not be completed for several years, so the NRC is issuing this bulletin to address the immediate concerns identified following the reviews of the responses to Bulletin 2002-01 and followup RAIs and the discovery of leaks from BMI penetrations at STP Unit 1.

NRC Bulletin 2003-02, "Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity" (Aug. 21, 2003) at 5. In the interim, NRC Bulletin 2003-02 required, inter alia, that each PWR licensee describe the lower head inspection program that would be conducted at its plant in the next and subsequent refueling outages. Id. at 6. In response, NMC has committed to perform a 100-percent bare-metal visual inspection of

[45] In its 2004 revision to the EA-03-009 Order, the NRC reiterated its assessment of the long-term nature of the changes it intends to make to assure that the reactor coolant pressure boundary would be maintained against the risk of PWSCC. EA-03-009 Revision at 4.

the lower RPV dome up to and including each bottom-mounted instrumentation penetration to the RPV junction during every other refueling outage at each Unit.[46]

The NRC Staff also established an Interim Staff Guidance item, LR-ISG-19B (concerning cracking of nickel-alloy components in the reactor coolant pressure boundary), to alert license renewal applicants that a longer term program is under development.[47] See Application, § 2.1.1.3. The NRC license renewal web page describes the status of LR-ISG-19B as follows:

> This LR-ISG is under development. NEI and Electric Power Research Institute Materials Reliability Program (EPRI-MRP) is to develop an augmented inspection program for GALL AMP XI.M11-B, 'Nickel-Alloy Base-Metal Components and Welds in the Reactor Coolant Pressure Boundary.' This AMP [Aging Management Program] will not be completed until after the NRC approves an augmented inspection program for nickel-alloy base metal components and welds as proposed by the ERPI-MRP.

See http://www.nrc.gov/reading-rm/doc-collections/isg/license-renewal.html.

In other words, there is no current requirement or guidance that license renewal applicants could follow to implement the longer term program that the NRC is developing to manage PWSCC on nickel-alloy nozzles and penetrations. Thus, in Section B2.1.28, NMC has committed to continue the specific inspection program required by EA-03-009; and in Section B2.1.27, NMC indicates that it will continue to comply with its commitments in response to

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[46] See Letter from NRC to NMC, "Prairie Island Nuclear Generating Plant, Unit 2 – Response to NRC Bulletin 2003-02, 'Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity'" (Oct. 5, 2004) at 1, available at ADAMS Accession No. ML042580379; Letter from NRC to NMC, "Prairie Island Nuclear Generating Plant, Unit 1 – Response to NRC Bulletin 2003-02, 'Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity'" (July 7, 2005) at 1, available at ADAMS Accession No. ML051790189; Letter from NMC to NRC, "Notification of Change in Commitment Made in Prairie Island Generating Plant (PINGP) 30-Day Response to NRC Bulletin 2003-02" (Oct. 29, 2007), available at ADAMS Accession No. ML073020242.

[47] The Interim Staff Guidance ("ISG") process provides interim guidance to future license renewal applicants, and other interested stakeholders, until the emerging issues are incorporated into the next revision of the License Renewal guidance documents.

generic communications such as NRC Bulletin 2003-02 and responsibly acknowledges its intent to comply in the future with the broader program that the NRC is developing.

Contention 8 focuses on this commitment in Section B2.1.27 of the Application to "(1) comply with applicable NRC orders, and (2) implement applicable NRC Bulletins, Generic Letters, and staff-accepted industry guidelines" with respect to managing PWSCC on nickel-alloy nozzles and penetrations other than those associated with the RPV penetration nozzles. Application, § B2.1.27. The PIIC charges that the Application's commitment "to do whatever the NRC tells them to do does not demonstrate the effectiveness of an aging management program." Petition at 31.

The PIIC's challenge does not raise a litigable issue. NMC's undertaking in section B2.1.27 to comply with applicable NRC orders, and to implement applicable NRC Bulletins, Generic Letters, and Staff-accepted industry guidelines simply reflects NMC's commitment to continue the inspections that it identified in response to NRC Bulletin 2003-02 and to comply with the longer term actions that the NRC has announced it will implement at some future time. The PIIC provides no basis to dispute the adequacy of inspections of the lower head penetrations to which NMC committed in response to NRC Bulletin 2003-02, or to the specific, interim inspection requirements for the upper head penetrations which the Commission (in issuing EA-03-009) determined are sufficient to protect the public health and safety while the longer term program is being developed. See EA-03-009 at 5. The PIIC's attempt to challenge the longer term program that the NRC is still establishing does not create a genuine dispute with NMC on a

material issue of law or fact, and does not assert an admissible contention regarding it. 10 C.F.R. § 2.309(f)(1)(vi).[48]

In addition, as discussed above, the long-term program that the NRC is developing will likely involve changes to the NRC regulations.[49] It is well established that licensing boards "should not accept in individual license proceedings contentions which are (or are about to become) the subject of rulemaking by the Commission." Oconee, CLI-99-11, 49 N.R.C. at 345 (1999), quoting Douglas Point, ALAB-218, 8 A.E.C. at 85.

For these reasons, Contention 8 is inadmissible.

9. Contention 9: Buried Components

Contention 9, which claims that the PINGP aging management programs are inadequate because the Application does not provide for adequate inspection, replacement before leakage, or monitoring of potential leakage from buried systems, including piping and tanks that may contain or convey radioactively-contaminated water and/or other fluids (Petition at 32), is inadmissible because (1) the Contention is outside the scope of license renewal, contrary to 10 C.F.R. § 2.309(f)(1)(iii); (2) the Contention provides no factual basis for its claims, contrary to 10 C.F.R. § 2.309(f)(1)(v); and (3) the Contention is unduly vague and fails to show the existence of any genuine dispute with the Application, contrary to 10 C.F.R. § 2.309(f)(1)(i) and 10 C.F.R. § 2.309(f)(1)(vi).

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[48] This is not a situation in which a program can be defined at this time, to be implemented later on. Compare Indian Point, LBP-08-13 at 114-15. At this time, NMC does not know what program would satisfy the yet-to-be defined regulations and guidance on this issue. The PIIC does not know either, and the Petition fails to identify what the contents of an acceptable program should be.

[49] For example, the amendments to 10 C.F.R. § 50.55a published on September 10, 2008, require that all licensees comply with ASME Code Case N-722 and certain conditions governing the inspection of penetration welds in Class 1 components fabricated with Alloy 600/82/182 material (i.e. a nickel alloy). See 73 Fed. Reg. at 52,742-43.

a. Contention 9 Is Beyond the Scope of License Renewal Proceedings

At the outset, Contention 9 should be rejected because it constitutes an impermissible challenge to the Commission's license renewal regulations and is beyond the scope of this license renewal proceeding in two key respects. First, Contention 9 is overly broad. Contrary to the wide breadth of Contention 9, the license renewal rule does not encompass "all systems, structures and components" that may contain or convey radioactive fluids. Rather, the scope of the license renewal regulations is carefully prescribed in 10 C.F.R. § 54.4. That provision limits the scope of 10 C.F.R. Part 54 to (1) safety related systems, structures and components relied on to maintain the integrity of the reactor coolant pressure boundary, to shut down the reactor and maintain it in a safe condition, and to prevent or mitigate the consequences of reactor accidents; (2) non-safety related systems, structures and components whose failure could prevent such safety-related systems from accomplishing their intended function; and (3) other nuclear power plant systems, structures and components relied on to comply with the Commission's rules concerning fire protection, environmental qualification, pressurized thermal shock, anticipated transients without scram, and station blackout.

Many plant systems and components that may contain or convey radioactively contaminated water are not within this defined scope of 10 C.F.R. Part 54. For example, the plant's discharge line through which radioactive effluents may be discharged in accordance with 10 C.F.R. Part 20 is not within the scope set forth in 10 C.F.R. § 54.4.[50] Indeed, the Commission

[50] In fact, there are no buried components within the scope of the license renewal rule at PINGP that contain radioactive liquids. The Application indicates that there are three systems within the scope of license renewal that contain buried piping: (1) [the intake portion of the] cooling water system (Application at 2.3.3.6); (2) the fire protection system (id. at 2.3.3.9); and (3) the fuel oil system (id. at 2.3.3.10). None of these systems contains or carries radioactive liquids. The PIIC does not address this information in the Application and does not show that any of this buried piping within the scope of the license renewal rule contains radioactive liquid. Therefore, the PIIC does not show the existence of any genuine dispute with the Application, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

specifically denied a petition for rulemaking filed by the Union of Concerned Scientists that would have revised the scope of the license renewal rule to cover "liquid and gaseous radioactive waste management systems."[51] The PIIC's broadly worded contention would, however, include such systems in its claims of inadequate aging management directly challenging the Commission's determination that such systems are not covered by the license renewal rules. In so doing, the Contention impermissibly challenges the Commission's regulation.

Second, as reflected by its over-breadth, Contention 9 is fundamentally inadmissible because its real focus in not aging management, but on the adequacy of PINGP's radiological monitoring program and the prevention of liquid releases to the environment, which are beyond the scope of this proceeding. The PIIC claims that "there is no adequate monitoring to determine if and when leakage from theses systems, structures and components occurs" and that such monitoring is necessary to ensure that buried components "maintain sufficient integrity to prevent the uncontrolled release of radioactivity to the environment." Petition at 32-33 (emphasis added). This claim is beyond the scope of this proceeding because monitoring for radiological releases is an operational issue not within the scope of license renewal proceedings. As stated by the licensing board in rejecting an analogous contention in the Monticello license renewal proceeding:

> NAWO's second contention, like its first, fails to meet the pleading requirements of 10 C.F.R. Part 2. NAWO's contention asserts that "radiation monitoring at Monticello is not adequate" and calls for new monitoring techniques. Radiation monitoring programs, however, are subject to ongoing regulatory oversight . . . and, therefore, are beyond the scope of this proceeding.

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[51] 66 Fed. Reg. 65,141 (Dec. 18, 2001) ("Union of Concerned Scientists; Denial of Petition for Rulemaking"). The Commission denied the petition because (1) "liquid and gaseous radioactive waste management systems are not involved in design and licensing basis events considered for license renewal," and (2) "the existing regulatory process is acceptable for maintaining the performance of the radioactive waste systems throughout the period of extended operation in order to keep exposures to radiation at the current levels below regulatory limits consistent with the conclusions made in the applicable regulations." Id.

Nuclear Management Co., LLC (Monticello Nuclear Generating Plant), LBP-05-31, 62 N.R.C. 735, 754 (2005) (emphasis added; footnote omitted); see also Entergy Nuclear Operations, Inc. (Pilgrim Nuclear Power Station), LBP-07-12, 66 N.R.C. 113, 129 (2007) ("prevention of leaks per se is not a stated objective of any relevant aging management program"); id. at130 n.81 ("monitoring of radiological releases, or determinations of how leakage could harm health or the environment, are not legitimately in dispute here, because they do not relate to aging and/or because they are addressed as part of ongoing regulatory processes") (citation omitted).

Thus, radiological "monitoring is not proper subject matter for license extension contentions."[52] Rather, the NRC addresses operational issues, such as leakage monitoring, with continuous oversight and enforcement. See Millstone, CLI-04-36, 60 N.R.C. at 638; Union of Concerned Scientists Denial of Petition for Rulemaking, supra, note 51. Furthermore, as discussed above, "[l]icense renewal reviews are not intended to 'duplicate the Commission's ongoing reviews of operating reactors.'" Turkey Point, CLI-01-17, 54 N.R.C. at 7. See also Pilgrim, LBP-06-23, 64 N.R.C. at 274-77 (2006) (citing Turkey Point, CLI-01-17, 54 N.R.C. at 7); 56 Fed. Reg. at 64,946; Monticello, LBP-05-31, 62 N.R.C. at 754.

The Petition attempts to escape the logic and weight of this precedent and bring the Contention within the scope of license renewal by arguing that leaks and corrosion of buried piping "compromise their ability to perform their intended function . . . to maintain sufficient integrity to prevent the uncontrolled release of radioactivity to the environment." Petition at 33 (emphasis added). However, the license renewal rule specifically defines the "intended functions" that systems, structures and components must be shown to fulfill in 10 C.F.R. § 54.21 are as "those functions that are the bases for including them within the scope of license renewal"

[52] Order (Denying Pilgrim Watch's Motion for Reconsideration, slip op. at 5 (Jan. 11, 2008), available at ADAMS Accession No. ML080110358.

as specified in 10 C.F.R. § 54.4(a)(1)-(3). In other words, the only issue for license renewal is whether covered systems and components will continue to perform "their intended safety functions" or other license renewal function as specified in 10 C.F.R. § 54.4(a)(1)-(3), during the license renewal period. Pilgrim, LBP-07-12, 66 N.R.C. at 129. The precedent cited above makes clear that preventing the release of radioactivity into the ground water is not one of those functions. See Monticello, LBP-05-31, 62 N.R.C. at 754 (rejecting claims of inadequate "radiation monitoring" and asserted need "for new monitoring techniques"); Pilgrim, LBP-07-12, 66 N.R.C. at 129 ("prevention of leaks per se is not a stated objective of any relevant aging management program"). Instead, such concerns are covered by the plant's operational monitoring programs, which as the Commission has made clear are not within the scope of license renewal.

In short, because the Petition focuses on monitoring of leakage from all underground piping and tanks "to prevent the uncontrolled release of radioactivity to the environment," Contention 9 does not meet the standard of an admissible contention set forth in 10 C.F.R. § 2.309(f)(1)(iii), which requires that a contention fall within the scope of the license renewal proceeding.

b. Contention 9 Fails to Provide the Necessary Factual Basis for an Admissible Contention as Required by 10 C.F.R. § 2.309(f)(1)(v)

Contention 9 fails to meet the requirement of 10 C.F.R. § 2.309(f)(1)(v) to provide "references to the specific sources and documents on which the petitioner intends to rely to support its position on the issue." While it refers to numerous examples of leaks at other plants, the Contention provides no basis to tie those leaks to any alleged failure of the PINGP license renewal aging management program. Similarly, its reference to the Hausler Declaration in the Indian Point proceeding provides no basis to claim any deficiency in the PINGP aging

management program. Nowhere does Contention 9 provide any facts specific to PINGP, nor does it include a supporting statement of any expert or another witness retained by the PIIC for this proceeding.

In an effort to support its Contention, the PIIC provides a list of recent events at other plants in which "radioactively contaminated water" was released to the environment. The PIIC claims that "[o]ne common aspect of many of these leaks… is that they have been discovered by happenstance and that they usually have gone undetected for an extended period of time thereby permitting increasingly larger amounts of contaminated water to enter the ground (or air) around the facilities." Petition at 33. However, the PIIC makes no showing that any of these events is relevant to buried components within the scope of license renewal at PINGP, or to adequacy of the programs managing the aging of such components at PINGP.

The PIIC provides no basis to link the leaks that have occurred at other nuclear power plants to any in-scope license renewal systems and components or to any claimed inadequacy of the aging management plans for PINGP. Therefore, the incidents at other plants provide no factual basis for the contention. Incidents at other plants generally are not probative for consideration at an individual plant absent some showing of relevance or similarity. See Pilgrim, LBP-07-12, 66 N.R.C. at 130. A brief review of some of the incidents referred to in the Petition demonstrate the lack of relevance to the license renewal issues presented here:

- The document cited by the PIIC regarding the Dresden Nuclear Power Plant in Illinois states that the leakage event was not the cause of the elevated levels of tritium. See NRC Preliminary Listing of Events Involving Tritium Leaks (Mar. 28, 2006), ML0690940382 ("licensee's other monitoring results and an independent hydrology study do not appear to support that the elevated levels of tritium in that well were from the 2004 [Condensate Storage Tank] pipe leakage.") at 5; see also Petition at 33.

- The document cited by the PIIC regarding Palo Verde Nuclear Generating Station in Arizona does not claim that buried pipes or tanks containing radioactive fluids are the source of the tritium contamination found in water onsite. See Follow Up for Tritium Contamination Found In Water Onsite (March 17, 2006), ML06070584 ("The apparent cause or source of the elevated tritium levels in the test holes has not been found/determined to date and is still under investigation by the licensee.") at 1; see also Petition at 34.

- The document cited by the PIIC regarding Catawba Nuclear Power Station located in York, South Carolina does not discuss the source of tritium discovered. Nothing in this document even suggests that in-scope license renewal buried pipes and tanks are the source of the tritium. NRC Preliminary Notification of Event or Unusual Occurrence, PNO-II-07-012, "Onsite Groundwater Tritium contamination" (Oct. 2007), ML072850013; See also Petition at 34. [The petition incorrectly cites the ADAMS accession number of this document.]

- The leaking pipe at Byron Nuclear Power Station to which the PIIC refers (Petition at 34) was not buried. Furthermore, the leaking pipe at Byron was not coated for corrosion protection like the buried pipes at PINGP. See Union of Concerned Scientists Issue Brief, Help Wanted: Dutch Boy at Byron (October 25, 2007) ("The leak occurred just above the concrete floor where the [essential service water] piping emerges from an underground run."), available at ADAMS Accession No. ML081090528.

In short, the reports of leakage at other plants cited by the PIIC provide no basis to support a claim that in-scope systems at PINGP with underground piping and tanks are likely to leak radioactive fluids or that PINGP's aging management plan for underground piping and tanks is inadequate. None of the leaks reported at other nuclear plants concerned, as can be best determined, systems or components analogous to the systems at PINGP with buried piping and tanks. Indeed, as noted above, supra note 50, none of the buried pipes or tanks at PINGP subject to the license renewal contain radioactively contaminated water. Nor is there any indication that these plants were implementing an aging management plan for underground piping and tanks when the leaks occurred. Thus, there is no basis to suggest that the program described in the Application is deficient. The reported leaks at other plants provide no basis for the claims in Contention 9, contrary to 10 C.F.R. § 2.309(f)(1)(v).

Likewise the Petition's reliance on Declaration of Rudolf H. Hausler (Nov. 30, 2007) in the Indian Point license renewal proceeding provides no factual basis for admission of Contention 9 in the PINGP license renewal proceeding. The Petition simply cites to various paragraphs of the Hausler Declaration, which solely make factual assertions and claims regarding the Indian Point plant. The Hausler Declaration contains no statements of fact or assertions or claims regarding PINGP. Nor does the PIIC provide any analysis or make any showing that any the statements made by Dr. Hausler regarding the Indian Point nuclear power plant apply to PINGP. Nowhere is Contention 9 supported by any facts specific to PINGP, nor does it include the statement of any expert or another witness retained by the PIIC for this proceeding. A petitioner cannot satisfy its burden to provide support for its contention by merely referencing a document without including analysis showing that it provides factual support for that contention. See USEC, Inc. (American Centrifuge Plant), LBP-05-28, 62 N.R.C. 585, 597 (2005).

Thus, Contention 9 is also inadmissible because the PIIC has failed to meet its burden to support its contention pursuant to 10 C.F.R. § 2.309(f)(1)(v).

c. Contention 9 is Inadmissible because It Is Unduly Vague and Does not Show the Existence of any Genuine Dispute with the Application

Finally, Contention 9 is inadmissible because it is unduly vague and fails to show the existence of any genuine dispute with the Application. The Contention must be rejected as impermissibly vague because it provides no specificity or basis for the alleged deficiencies. While the Petition alleges that "'piping' [is] one of the systems, structures and components included within Part 54" (Petition at 32), the PIIC identifies no specific PINGP systems or components within the scope of the rule that will not be adequately managed for aging, or that contain radioactive water which might be released. Indeed, as noted above, supra note 50, none

of the buried pipes or tanks within the scope of license renewal at PINGP contain radioactively contaminated water. The PIIC simply offers the vague assertion that "some of these piping systems work in conjunction with the essential service water system." Petition at 32. Such bare, unsupported assertions provide no basis for an admissible contention. In another license renewal proceeding, a licensing board rejected a similarly vague contention alleging that non-specified components needed to be managed to protect against contamination of the water supply. Monticello, LBP-05-31, 62 N.R.C. at 756 (contention that license application did not "contain adequate assurance that all components needing to be inspected and maintained will actually be subject to inspection and maintenance in a timely manner" rejected as "vague and speculative").

Furthermore, as stated, a review of the Application reveals that there in fact are no buried components within the scope of the license renewal rule at PINGP that contain radioactive liquids. The Application indicates that there are three systems within the scope of license renewal that contain buried piping: (1) [the intake portion of the] cooling water system (Application at 2.3.3.6), (2) the fire protection system (id. at 2.3.3.9), and (3) the fuel oil system (id. at 2.3.3.10). None of these three systems contains or carries radioactive liquids. The PIIC does not address this information in the Application and does not show that any of this buried piping within the scope of the license renewal rule contains radioactive liquid, or otherwise dispute this information in any way.

The Commission has made clear that a petitioner has an ironclad obligation to examine the Application and any other publicly available material that could serve as the basis for a contention:

> The petitioner has an ironclad obligation to examine the publicly available documentary material pertaining to the facility in question with sufficient care to enable the petitioner to uncover any information that could serve as the foundation for a specific contention. Neither Section 189a of the Atomic Energy

> Act nor [the corresponding Commission regulation] permits the filing of a vague, unparticularized contention, followed by an endeavor to flesh it out through discovery against the applicant or Staff.

54 Fed. Reg. at 33,170 (quoting Catawba, ALAB-687, 16 N.R.C. at 468 (emphasis added). Furthermore, a petition must contain references to the specific portion of the Application that the petitioner disputes and the supporting reasons for each dispute. 10 C.F.R. § 2.309(f)(1)(vi); see also, See Millstone, CLI-01-24, 54 N.R.C. at 358; Georgia Institute of Technology, LBP-95-6, 41 N.R.C. at 305. Here, Contention 9 consists of vague unparticularized allegations that fail to show the existence of any genuine dispute with the Application, contrary to 10 C.F.R. § 2.309(f)(1)(i) and 10 C.F.R. § 2.309(f)(1)(vi).

Contention 9 is inadmissible for all of the above-stated reasons.

10. Contention 10: Transformers

Contention 10, which alleges that the Application fails to include an aging management plan for transformers (Petition at 36), is inadmissible because it is inconsistent with, and therefore is an impermissible challenge to, the NRC's license renewal rule. Contention 10 is also inadmissible because it is not supported by any basis indicating a genuine, material dispute.

Under the license renewal rule, 10 C.F.R. § 54.4 defines the plant systems, structures and components within the scope of the rule, but 10 C.F.R. § 54.21(a)(1) then limits the structures and components subject to an aging management review to those structures and components "that perform an intended function . . . without moving parts or without a change in configuration or properties."[53] The identification of this subset of components subject to review is commonly referred to applications as screening.[54]

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[53] The focus on passive structures and components reflects the Commission's determination in promulgating the current license renewal rule that existing programs and regulatory requirements, including performance

In promulgating these requirements, the Commission stated that a change in configuration or properties should include "a change in state." 60 Fed. Reg. at 22,477. 10 C.F.R. § 54.21(a)(1)(i) provides examples of electrical components that are excluded, but specifically states that the exclusion is not limited to these examples.

Under NRC guidance implementing these provisions, transformers have been determined to be active components excluded from aging management review. Specifically, the NRC has determined that:

> Transformers perform their intended function through a change in state by stepping down voltage from higher to lower value, stepping up voltage to a higher value, or providing isolation to a load. Transformers perform their intended function through a change of state similar to switchgear, power supplies, battery chargers, and power inverters, which have been excluded in §54.21(a)(1)(i) from aging management review. Any degradation of the transformer's function is readily monitorable by a change in the electrical performance of the transformer and associated circuits. Trending electrical parameters measured during transformer surveillance and maintenance such as Doble test results, and advanced monitoring methods such as infrared thermography, and electrical circuit characterization and diagnosis provide a direct indication of the performance of the transformer. Therefore, transformers are not subject to an aging management review.

Letter from C. Grimes, NRC License Renewal Project Directorate, to D. Walters, NEI, "Determination of Aging Management Review for Electrical Components" (Sept. 19, 1997) at 2.[55] Consistent with the determination, the NRC Standard Review Plan indicates that transformers are not passive components subject to aging management review under Section 54.21(a)(1)(i). See NUREG-1800 at 2.1-23.

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monitoring under the maintenance rule, reasonably assure active functions in any period of extended operation. 60 Fed. Reg. at 22,471-72.

[54] See NUREG-1800, Rev. 1, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants," at 2.1-1, 2.1-9 ("NUREG-1800" or "Standard Review Plan").

[55] This NRC position is included in Appendix C to NEI-95-10, "(Industry Guidelines for Implementing the Requirements of 10 CFR Part 54 – The License Renewal Rule" (Rev. 6, June 2005), available at ADAMS Accession No. ML051860406. NEI-95-10 is endorsed by NRC Regulatory Guide 1.188 Rev. 1.

The PIIC points out that transformers are within the scope of 10 C.F.R. § 54.4, but are not identified in the Application as a commodity group subject to aging management review. Petition at 36. These assertions present no genuine dispute with the Application because they simply fail to recognize the screening which is required by 10 C.F.R. § 54.21(a)(1) to determine which structures and components within the scope of the rule are subject to aging management review. To the extent that the PIIC may be suggesting that all components within the scope of 10 C.F.R. § 54.4 must be subject to an aging management program, its Contention is an impermissible challenge to the license renewal rule (specifically, an impermissible challenge to 10 C.F.R. § 54.21(a)(1) under which active components are screened out).

It should be noted that the PIIC provides no basis to dispute the NRC's determination that transformers are active components. The PIIC simply fails to recognize that screening occurs. The PIIC makes no attempt to address the NRC's guidance available on the NRC website. It does not provide any basis – no expert opinion, reference, or other source – that would indicate that transformers should be considered passive components. Accordingly, even if the PIIC were contending that transformers are passive components, its Contention would be inadmissible as devoid of any support.

11. Contention 11: Flow-Accelerated Corrosion

The PIIC Contention 11, which alleges that the PINGP program for managing flow-accelerated corrosion ("FAC") fails to comply with 10 C.F.R. § 54.21(a)(3) (Petition at 37), is inadmissible because it is not supported by information demonstrating a genuine, material dispute with the Application. In essence, this Contention makes two principal claims: (a) that the FAC management program is deficient because it relies on a computer code, CHECWORKS, without sufficient benchmarking (Petition at 40) and (b) that, apart from a "simple assertion of

conformance with EPRI guidelines and the generic program description, the LRA does not offer any demonstration that the FAC effects will be adequately managed." Id. at 38. The first claim is based solely on a reference to a declaration in the Indian Point proceeding, without any real attempt to relate such information to PINGP. Indeed, the declaration in the Indian Point proceeding alleged that benchmarking of CHECWORKS was insufficient because of a stretch power uprate which had been implemented at that facility. No such uprate has occurred at PINGP. The PIIC's second claim fails to recognize the significance of the GALL Report and is unsupported by any information demonstrating a deficiency in the FAC program.

a. The Allegations Regarding Benchmarking in the Indian Point Proceeding Are Inapplicable to PINGP

Contention 11 is copied almost verbatim from Contention TC-2 filed by intervenor Riverkeeper, Inc. ("Riverkeeper") in the Indian Point Units 2 and 3 license renewal proceeding. See Riverkeeper, Inc.'s Request for Hearing and Petition to Intervene in Indian Point License Renewal Proceeding (Nov. 27, 2007), ADAMS Accession No. ML073410093 ("IP Riverkeeper Petition") at 15-23. In copying the Riverkeeper FAC contention, Contention 11 makes numerous factual claims that are both unsupported and, in many instances, inapplicable to PINGP.

Contention 11 is not supported by any facts specific to PINGP, and does not include the statement of any expert or another witness retained by the PIIC for purposes of this proceeding. Instead, it states that it "is supported by the expert Declaration of Dr. Joram Hopenfeld (November 29, 2007) for the Indian Point license renewal application." Petition at 38.[56] The

[56] The PIIC does not provide any basis for qualifying Dr. Hopenfeld as an "expert." The party sponsoring an "expert witness" bears the burden of demonstrating the expert's expertise in the field or area in which the expert offers an opinion. Pacific Gas & Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-410, 5 N.R.C. 1398, 1405 (1977). A proffered witness can only qualify as expert if his credentials show that he possesses the requisite "knowledge, skill, experience, training, or education." Fed. R. Evid. 702. The Curriculum Vitae included with Dr. Hopenfeld's Declaration in the Indian Point proceeding does not show that he has any training or experience in the evaluation of FAC or the use of computer codes to predict piping wear due to that

PIIC does not demonstrate that the statements made by Dr. Hopenfeld and Riverkeeper[57] with respect to the Indian Point plant apply to PINGP. In fact, they do not. Thus, the contention fails to satisfy the provisions of 10 C.F.R. §§ 2.309(f)(1)(v) and (vi), which require that an admissible contention: "(v) [p]rovide a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue" and (vi) . . . "provide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact." The Petition does not include any "expert opinion on the issue . . . on which the petitioner intends to rely at the hearing," but only impermissible, irrelevant hearsay. Commonwealth Edison Co. (Braidwood Nuclear Power Station, Units 1 and 2), LBP-86-12, 23 N.R.C. 414, 418-19 (1986).

Dr. Hopenfeld's Indian Point Declaration and Contention 11 herein, focus on the CHECWORKS computer code, which is allegedly used "without sufficient benchmarking of the operating parameters." Petition at 40. Dr. Hopenfeld (and the PIIC) assert that

> CHECWORKS must be benchmarked for each component and then updated when plant parameters change. In summary, CHECWORKS can be reliably used to predict pipe wall thinning only so long as: (a) all relevant locations are benchmarked for relevant plant parameters; (b) relevant plant parameters do not change significantly over time; and (c) benchmark data on relevant plant parameters are collected for a sufficiently long period of time.

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phenomenon. See IP Riverkeeper Petition, Exhibit 1 to Contentions TC-1 and TC-2, Declaration of Dr. Joram Hopenfeld in Support of Riverkeeper's Contentions TC-1 and TC-2.

[57] Dr. Hopenfeld's Declaration in the Indian Point proceeding merely states that the factual statements in the FAC contention are true and correct to the best of his knowledge, and that the expressions of opinion in the contention are based on his best professional judgment. Id. at ¶ 4. Therefore, the statements in the Riverkeeper FAC contention are attributable to Dr. Hopenfeld. Those statements include a large number of unsupported conclusory statements (e.g., that a minimum of 10-15 years would be an appropriate period of benchmarking empirical FAC models). It is well settled that unsupported conclusory assertions, even by an expert, cannot support the admission of a proffered contention. Calvert Cliffs, CLI-98-14, 48 N.R.C. at 41; Fansteel, Inc. (Muskogee, Oklahoma Site), CLI-03-13, 58 N.R.C. 195, 203 (2003).

Id. Dr. Hopenfeld (and the PIIC) opine that "for relatively simple geometries and one phase flow in straight pipes . . . it would be reasonable to assume that six years of plant operations would be sufficient to benchmark a code for a given set of plant parameters. For complex geometries . . . a minimum of 10-15 years would be a more appropriate period of benchmarking empirical FAC models." Id. at 41.

These assessments of the limitations and benchmarking requirements of CHECWORKS are presented without making any attempt to relate them to the use of CHECWORKS at PINGP. Indeed, the Petition does not state how long CHECWORKS has been in use at PINGP, how many years of operational data are currently incorporated into the CHECWORKS model, or how many years will have accumulated by August 2013, when the license renewal period will begin. Therefore, even if those assessments were correct (which they are not), the Contention provides no support for applying them to PINGP. Indeed, they are clearly inapplicable. NMC has incorporated FAC monitoring data back to 1988 into its CHECWORKS modeling, so that by 2013 there will be a total of 25 years of plant inspection data into the model, in excess of even the outside limit postulated by Dr. Hopenfeld.[58]

Moreover, Dr. Hopenfeld's opinion that the use of CHECWORKS at Indian Point may have been insufficiently benchmarked was predicated solely on the fact that

> On October 2004 and March 2005 IP2 and IP3 were granted a power increase of 3.26% and 4.85%, respectively. These power changes affect velocities, temperatures, coolant chemistry and steam moisture, mainly on the secondary side of the plant where the steam flow and feed flow increases are approximately

[58] The Petition asserts that the Application "does not explain how the FAC program has been benchmarked and does not provide any explanation of the predictive capability of CHECWORKS when wall thinning was identified." Petition at 41. The first assertion makes no sense. A FAC program is not "benchmarked;" only computer codes such as CHECWORKS are benchmarked. The meaning of the second assertion is unclear, but it appears to assume that the predictive ability of CHECWORKS depends on whether pipe wall thinning has been identified. There is nothing in the Contention to support such a linkage, and not even Dr. Hopenfeld claims that the predictive ability of CHECWORKS is affected by the extent of wear on a pipe.

> proportional to the power increase. CHECWORKS or any other data bank on FAC must now be updated.

IP Riverkeeper Petition at 21. No such uprates have occurred at PINGP.[59] Therefore, the PIIC makes no showing that Dr. Hopenfeld's allegations in Indian Point are applicable to PINGP, and provides no basis that would indicate that the CHECWORKS model in use at PINGP is not adequately benchmarked. Contention 11 therefore lacks factual basis.

b. The Application Complies with 10 C.F.R. § 54.21(a) By Referencing a Program That Has Been Found Sufficient in the GALL Report

The PIIC's Contention that "apart from [a] simple assertion of conformance with EPRI guidelines and the generic program description, the LRA does not offer any demonstration that the FAC effects will be adequately managed" (Petition at 38) similarly fails to raise any genuine, material issue. This Contention simply fails to recognize the significance of the GALL Report and its role in a license renewal application. By referencing and demonstrating consistency with the FAC program described in the GALL Report, the Application is committing to an aging management program which has been determined to be effective based on a comprehensive assessment of operating experience. The PIIC provides no information – no expert opinion, document, or other reference – that would indicate any ineffectiveness of the program determined to be adequate by the GALL Report standards and incorporated into the Application. Consequently, the PIIC's Contention does not demonstrate the existence of any genuine, material dispute with the Application.

The GALL Report is entitled to significant weight in addressing the issue of adequacy of aging management programs. It identifies aging management programs that have been

[59] Any future application by PINGP for an uprate would have to address any changes in aging management programs necessitated by the uprate.

determined by the NRC to be acceptable programs to manage the effects of aging on systems, structures and components within the scope of license renewal as required by 10 C.F.R. Part 54. The GALL Report is based on a systematic compilation of plant aging information and the evaluation of program attributes for managing the effects of aging on systems, structures and components for license renewal. GALL Report at 1-3.

The NRC Staff developed the GALL Report at the direction of the Commission to provide a basis for evaluating the adequacy of aging management programs for license renewal. GALL Report at 1, 4; Memorandum from A. Vietti-Cook to W. Travers, "Staff Requirements - SECY-99-148 - Credit for Existing Programs for License Renewal" (Aug. 27, 1999) (ADAMS Accession No. ML003751930). In this Staff Requirements Memorandum, the Commission approved the Staff's recommendation to focus staff review guidance in the Standard Review Plan ("SRP") on areas where existing programs should be augmented, as described in SECY-99-148, to provide credit for existing programs for license renewal. In directing the Staff to proceed with the development of the GALL Report, the Commission stated:

> The GALL report should receive the benefit of the experience from the staff members who conducted the review of the license renewal applications. The staff should ensure that lessons learned on the initial license renewal applications are incorporated in these documents and should provide them to the Commission for information when they are released for public comment. The staff should ensure that regulatory guidance is clear and understandable to stakeholders so that the license renewal process is stable and predictable for future applicants.
>
> The staff should seek stakeholders' participation in the development of the GALL report, SRP, and regulatory guide and should inform the Commission of any significant issues that may arise from this process.
>
> a. When the GALL report and SRP are issued in draft for public comment, workshops should be held to bring all interested stakeholders up to date.
>
> b. Hold focused public meetings between the staff and stakeholders to resolve comments on individual issues.

> c. Hold a Commission briefing after the comment period and the staff's initial evaluation of the comments.
>
> The final GALL report and final SRP should be submitted to the Commission for approval prior to publication.

Id. at 1.

Consistent with these instructions from the Commission, the NRC Staff submitted the SRP and the GALL Report to the Commission for approval in April 2001. SECY-01-0074, Memorandum from W. Travers to Commissioners, "Approval to Publish Generic License Renewal Guidance Documents" (Apr. 26, 2001) (ADAMS Accession No. ML010990201). As reflected in SECY-01-0074, this generic guidance was developed with the assistance of the Office of Nuclear Regulatory Research, the Argonne and Brookhaven National Laboratories, and extensive public involvement. SECY-01-0074 further stated:

> Applying the GALL report will reduce the need to review plant-specific aging management programs. . . . In addition, when applicants state that their aging management programs are bounded by the GALL programs, the staff's review will shift from reviewing each program in detail to verifying the applicant's assertion. This will significantly reduce staff review resources and increase the efficiency of the review. The staff believes that the improved license renewal guidance documents will increase the stability and predictability of the license renewal review process because they describe the framework for a disciplined process that clearly articulates the evaluation criteria. They also provide a clear and sound technical basis to support the staff's conclusion that (1) actions have been identified and have been or will be taken with respect to managing the effects of aging during the period of extended operation for structures, systems, and components within the scope of the license renewal rule, (2) and that actions have been identified and have been or will be taken with respect to time-limited aging analysis that are required to be reviewed in accordance with the license renewal rule. These documents should also increase public confidence in the license renewal review process because the public was involved in developing them, and the public's comments were considered and incorporated, and because the documents will make the staff's license renewal reviews more predictable.

SECY-01-0074 at 4-5 (emphasis added).

The Commission approved the issuance of this guidance. The Commission commended the Staff for its outstanding efforts in developing these license renewal guidance documents, and stated: "These documents should serve to enhance the predictability, consistency, and efficiency of the NRC reviews of license renewal applications." SECY-01-0074 – Approval to Publish Generic License Renewal Guidance Documents (July 2, 2001) (ADAMS Accession No. ML011860168).

Thus, the Commission has approved the use of the GALL Report (and the companion Standard Review Plan referencing the GALL Report) as a means of crediting existing programs that have been demonstrated to be adequate, in order to improve the license renewal process and reduce unnecessary reviews. Accordingly, the GALL Report and the SRP should be afforded special weight. Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-01-22, 54 N.R.C. 255, 264 (2001) ("Where the NRC develops a guidance document to assist in compliance with applicable regulations, it is entitled to special weight") (footnote omitted).[60] Such deference is particularly appropriate with respect to the GALL Report because it was developed at the Commission's direction with considerable public involvement, and its issuance was approved by the Commission. Indeed, the procedures used in developing this guidance were essentially the same as those typically employed in rulemaking proceedings.

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[60] In Turkey Point, the Commission explained that the focus of license renewal adjudicatory hearings are the same as the scope of the Staff review:

> In sum, our license renewal safety review seeks to mitigate the "detrimental effects of aging resulting from operation beyond the initial license term." 60 Fed. Reg. at 22,463. To that effect, our rules "focus[ ] the renewal review on plant systems, structures, and components for which current [regulatory] activities and requirements may not be sufficient to manage the effects of aging in the period of extended operation." Id. at 22,469 (emphasis added). Adjudicatory hearings in individual license renewal proceedings will share the same scope of issues as our NRC Staff review, for our hearing process (like our Staff's review) necessarily examines only the questions our safety rules make pertinent.

CLI-01-17, 54 N.R.C. at 10 (footnote omitted).

Here, the Application commits to a FAC management program that meets the program description in the GALL Report and that is consistent in all respects with Evaluation and Technical Basis in the GALL Report. Appendix B to the Application describes the PINGP FAC Program as follows:

> The Flow-Accelerated Corrosion (FAC) Program is a condition monitoring program based on the Electric Power Research Institute (EPRI) guidelines in Nuclear Safety Analysis Center (NSAC)-202L-R2 for carbon steel and bronze components containing high-energy single phase or two phase fluids. The program manages loss of material due to flow-accelerated corrosion in piping and components by (a) conducting an analysis to determine critical locations, (b) performing baseline inspections to determine the extent of thinning at these locations, and (c) performing follow-up inspections to confirm the predictions of the rate of thinning, or repairing or replacing components as necessary.

Application at B-42. This description conforms to the program description in Section XI.M17 of the GALL Report. See GALL Report, Vol. 2, at XI M-61. The Application also indicates that the FAC management complies with PINGP's response to NRC Generic Letter 89-08, Erosion/Corrosion-Induced Pipe Wall Thinning (May 2, 2989). Application, Section B2.1.17 at B-42.

Section XI.M17 goes on to list ten specific elements that a FAC Program must include: (1) scope of program; (2) preventive actions; (3) parameters monitored/inspected; (4) detection of aging effects; (5) monitoring and trending; (6) acceptance criteria; (7) corrective actions; (8) confirmation process; (9) administrative controls; and (10) operating experience. These elements are described in general terms in Section XI.M17 and in detail in NSAC-202L. For example, with respect to acceptance criteria (alleged by the PIIC to be lacking in the PINGP FAC Program, see Petition at 42),[61] NSAC-202L provides the following guidance:

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[61] This allegation is taken directly from Riverkeeper's contention in the Indian Point license renewal proceeding. See IP Riverkeeper Petition at 16, 23. The PIIC makes no attempt to establish that it is applicable to PINGP.

> The minimum acceptable wall thickness for each component should be calculated. For ASME Class 1, 2 and 3 pipe, component acceptance criteria are typically based on the ASME Boiler and Pressure Vessel construction code of record for the plant (reference 13) or using Code Case N-597 (reference 15), which is based on EPRI report NP-5911 (reference 16). For ANSI B31.1 (reference 14) pipe, component acceptance criteria are typically based on the construction code of record for the plant or from guidance provided by industry standards such as Code Case N-597.

NSAC-202L, Section 4.7.1 at 4-26, ADAMS Accession No. ML081750039 (footnotes omitted). Likewise, the minimum inspection requirements and the frequency of inspection (allegedly missing from the Application, see Petition at 43)[62] are defined in NSAC-202L Section 4.4 in considerable detail. See NSAC-202L, Section 4.7.1.

The Application evaluates the PINGP FAC program for consistency with the GALL Report. It observes that the PINGP FAC program is an existing program and determines that it "is consistent with the recommendations of NUREG-1801, Chapter XI, Program XI.M17, Flow Accelerated Corrosion." Application, Section B2.1.17 at B-42. It takes no exceptions to any of the recommendations in the GALL Report. Id. The PIIC does not contest the PINGP FAC program's compliance with NUREG-1801 and NSAC-202L. See Petition at 38.

The Application also indicates that the operating experience at PINGP supports the adequacy of this program.

> A review of operating experience for the FAC Program identified no adverse trends or issues with program performance. Wall thinning has been identified, and the associated components replaced, prior to causing any significant impact to safe operation or loss of intended functions. The review of operating experience indicates the FAC Program is effective in monitoring and detecting degradation and taking effective corrective actions as needed when acceptance criteria are not met.

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[62] These allegations are also taken directly from Riverkeeper's contention in Indian Point. Id.

Application at B-43. The PIIC identifies no PINGP operating experience that would conflict with this conclusion.

NMC submits that demonstrated compliance with the GALL Report is substantial evidence of compliance with the NRC's regulatory requirements (i.e., substantial evidence of an effective aging management program). While the GALL Report is not above challenge in a hearing, NMC submits that a petitioner must do more than simply allege that referencing a NUREG-1801 approved program is insufficient.

Further, under the NRC regulations, the Application may properly adopt the program descriptions in NUREG-1801 and NSAC-202L to establish an acceptable aging management program according to NRC rules. 10 C.F.R. § 54.17(e).[63] Therefore, the Application is not lacking in necessary specificity or level of detail by incorporating by reference the detailed guidance in NUREG-1801 and NSAC-202L.

The PIIC provides no information that would indicate any deficiency or ineffectiveness of the PINGP FAC program. The PIIC and Dr. Hopenfeld refer to incidents that occurred at four nuclear power plants (Surry, Mihama, San Onofre, and Fort Calhoun) for the proposition that "<u>If FAC conditions are not properly managed</u>, there can be significant safety risk." Petition at 39 (repeating IP Riverkeeper Petition at 18) (emphasis added). However, that proposition is not relevant to the conditions at PINGP, where a formal program to address FAC has been in effect for many years. The PIIC provides no information indicating that these incidents were the result

[63] 10 C.F.R. § 54.17(e) states: "An application may incorporate by reference information contained in previous applications for licenses or license amendments, statements, correspondence, or reports filed with the Commission, provided that the references are clear and specific."

of any deficiency in CHECWORKS, or indeed any deficiency in a FAC management program meeting the GALL Report recommendations.[64]

Likewise, contrary to the assertions of the PIIC and Dr. Hopenfeld (Petition at 42, repeating IP Riverkeeper Petition at 22), the pipe failure statistics presented in NUREG/CR-6936, Probabilities of Failure and Uncertainty Estimate Information for Passive Components - a Literature Review (ADAMS Accession No. ML071430371) (May 2007) do not demonstrate any ineffectiveness of CHECWORKS. NUREG/CR-6936 does not deal with the adequacy of FAC management programs or with the effectiveness of FAC prediction codes (it does not even mention CHECWORKS), but "focuse[s] primarily on probabilistic structural mechanics evaluations of plant-specific components for domestic nuclear power plants with pressurized-water reactors or boiling-water reactors." NUREG/CR-6936, Foreword at v. In other words, NUREG/CR-6936 investigated only material and component vulnerability to piping degradation mechanisms, and is therefore irrelevant to the adequacy of the PINGP FAC program. As previously noted, a document put forth by a petitioner as the basis for a contention is subject to Board scrutiny, both as to the portions that support the petitioners' assertions and those that do

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[64] Indeed, the 1986 pipe rupture at Surry was the event that prompted (and thus predated) the development of FAC management program and CHECWORKS. The piping failure at San Onofre was the result of "inadequate design of the feedring and feedring supports," a design deficiency wholly unrelated to the PINGP FAC Program. See NRC Information Notice 91-19, Steam Generator Feedwater Distribution Piping Damage (Mar. 12, 1991), ADAMS Accession No. ML031190553, at 2. The San Onofre events also predated the guidance in NSAC-202L (issued in November 1993). The 1997 failure at Fort Calhoun was the result of operator error in using CHECWORKS (in particular, modeling the component as having been in service for 14 years rather than two, which resulted in CHECWORKS underestimating actual wear rate). NRC Information Notice 97-84, Rupture In Extraction Steam Piping as a Result of Flow-Accelerated Corrosion (Dec. 11, 1997), ADAMS Accession No. ML031050037. The 2004 event at Mihama involved a plant that did not utilize CHECWORKS or a program consistent with NSAC-202L. See generally Vermont Yankee License Renewal Docket No. 50-271-LR, Testimony of Jeffrey S. Horowitz and James C. Fitzpatrick on NEC Contention 4 -Flow Accelerated Corrosion (May 12, 2008) at 35-36, available at ADAMS Accession No. ML082330392.

not.[65] Here, NUREG/CR-6936 on its face provides no basis to challenge the adequacy of the FAC management program approved in the GALL Report and incorporated into the Application.

In sum, Contention 11 fails to show that a genuine dispute exists with the Applicant on a material issue of law or fact. 10 C.F.R. § 2.309(f)(1)(vi). Therefore, the contention is inadmissible and should be rejected.

V. SELECTION OF HEARING PROCEDURES

Commission rules require that the Atomic Safety and Licensing Board designated to rule on the Petition "determine and identify the specific procedures to be used for the proceeding" pursuant to 10 C.F.R. §§ 2.310 (a)-(h). 10 C.F.R. § 2.310. The regulations are explicit that "proceedings for the . . . grant . . . of licenses subject to [10 C.F.R. Part 52] may be conducted under the procedures of subpart L." Id. at § 2.310(a). The regulations permit the presiding officer to use the procedures in 10 C.F.R. Part 2, Subpart G ("Subpart G") in certain circumstances. Id. § at 2.310(d). It is the proponent of the contentions, however, who has the burden of demonstrating "by reference to the contention and bases provided and the specific procedures in subpart G of this part, that resolution of the contention necessitates resolution of material issues of fact which may be best determined through the use of the identified procedures." Id. at § 2.309(g). The PIIC did not address the selection of hearing procedures in its Petition and therefore has not shown that Subpart G procedures should be used in this proceeding. Accordingly, any hearing arising from the PIIC's Petition should be governed by the procedures of Subpart L.

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[65] See note 12, supra.

VI. CONCLUSION

For the reasons stated above, the Petition should be denied.

Respectfully Submitted,

/Signed electronically by David R. Lewis/

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Dated: September 12, 2008

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of	)	
	)	Docket Nos. 50-282-LR
Nuclear Management Co., et al.	)	50-306-LR
	)	
(Prairie Island Nuclear Generating Plant,	)	ASLBP No. 08-871-01-LR
Units 1 and 2)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of "Nuclear Management Company's Answer to the Prairie Island Indian Community's Petition to Intervene," dated September 12, 2008, was provided to the Electronic Information Exchange for service on the individuals listed below, this 12th day of September, 2008.

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