UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISION
BEFORE THE COMMISSION

In the Matter of:	)	
	)	Docket No. 50-255-LA-2
ENTERGY NUCLEAR OPERATIONS, INC.,	)	
	)	August 7, 2015
(Palisades Nuclear Plant)	)	

AMICUS CURIAE BRIEF BY SIERRA CLUB IN SUPPORT OF ATOMIC SAFETY AND LICENSING BOARD DECISION

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I. INTRODUCTION

This matter is an appeal by Entergy Nuclear Operations, Inc., from the decision of the Atomic Safety and Licensing Board (ASLB) granting the Intervenors, Beyond Nuclear, et al., a hearing on Entergy's license amendment request (LAR). The Sierra Club supports the ASLB decision and files this Amicus Curiae Brief to explain why it supports the ASLB decision and why it is important for the Commission to allow the intervention of Beyond Nuclear, et al. to be heard.

The Sierra Club is the nation's largest grassroots environmental organization, with over 600,000 members. Its Michigan Chapter has approximately 16,000 members. The Sierra Club supports sustainable energy alternatives that do not harm the environment. The Sierra Club opposes nuclear power because its fuel cycle from uranium mining to spent radioactive fuel poses grave dangers to the environment. In addition, reliance on nuclear power unjustifiably delays the beneficial transition to clean and renewable energy sources.

With specific reference to the Palisades Nuclear Plant and the embrittlement of the reactor vessel at the plant, members of the Michigan Chapter are at risk if the

embrittled reactor vessel shatters and disperses radioactive material into the environment. This can affect the air, water and soil upon which Michigan residents depend. Therefore, the attempt by Entergy to shortcut assurances that the reactor vessel is safe is unacceptable.

II. THE INTERVENORS ARE ENTITLED TO A HEARING

It is important to remember that the decision of the ASLB from which this appeal is taken was simply a decision that the Intervenors are entitled to a hearing. No decision was made on the merits of the Intervenors' contention. Therefore, the decision was a victory for public participation. The Commission justifiably prides itself on promoting transparency and public participation.

Specifically, with respect to licensing decisions, the Atomic Energy Act, 42 U.S.C. § 2239(a), requires that the Commission must grant a hearing upon "the request of any person whose interest may be affected by the proceeding, and shall admit any such person as a party to such proceeding."

Furthermore, the Commission's regulations promote the concept of public participation when a hearing is requested. Pursuant to 10 C.F.R. § 2.309(f), a petitioner's contentions must: (1) provide a specific statement of the issue of law or fact to be raised or controverted; (2)

provide a brief explanation of the basis for the contention; (3) demonstrate that the issue raised in the contention is within the scope of the proceeding; (4) demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding; (5) provide a concise statement of the alleged facts or expert opinions which support the petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to specific sources and documents on which the petitioner intends to rely; (6) provide sufficient information to show that a genuine dispute exists with the licensee on a material issue of law or fact.

The Commission has also made clear that the burden on a petitioner in stating its contentions is not as heavy as Entergy asserts in its appeal brief. In Dominion Nuclear Conn., Inc. (Millstone Nuclear Power Station, Units 2 & 3), CLI-01-24, 54 NRC 349, the Commission described the contention admissibility standards as "insist[ing] upon some 'reasonably specific factual and legal basis' for the contention." Id., 54 NRC 349, 359. The Commission further explained in Millstone that the standards for contention admissibility were meant to prevent contentions based on "little more than speculation" and intervenors who had

"negligible knowledge of nuclear power issues and, in fact, no direct case to present." Id. at 358. Rather, petitioners are required only to "articulate at the outset the specific issues they wish to litigate." Id. at 359.

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

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

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

The authorities cited in Entergy's appeal brief do not support its argument (Entergy Brief p. 11). It is clear that the Intervenors' contention is based on much more than mere speculation. The contention cites specific facts, relies on the expert opinion of Arnold Gundersen, a qualified nuclear engineer, and also relies on technical documents and guidance from the Commission. The contention is discussed in significant detail, showing clearly that the Intervenors and their expert witness know what they are talking about and that the contention is more than mere speculation.

The ASLB majority issued a thoroughly explained decision, based on the correct standard for evaluating contention admissibility. With respect to contention admissibility, the Commission defers to the ASLB unless the

Commission finds either an error of law or an abuse of discretion. In re FirstEnergy Nuclear Operating Co., 75 N.R.C. 393, 396-397 (2012). In this case, the ASLB committed neither an error of law nor an abuse of discretion. Entergy simply disagrees with the reasoning of the ASLB majority.

The Sierra Club emphasizes again that this appeal is not about the merits of the contention. It is only about whether the Intervenors are entitled to a hearing. Entergy's brief goes into great detail about the technical issues involved in the Intervenors' contention. The Commission should not be distracted by this journey into the weeds. At this point, the Intervenors have not had an opportunity to present their proof in support of their technical arguments. It is the duty of the ASLB, not the Commission, at this stage of the proceedings to determine the merits of the contention. The Intervenors have presented more than enough information in support of their contention to show that the contention is based on facts and not mere speculation. That is all that is required to support a contention.

The majority decision of the ASLB was correct and the Commission should affirm that decision.

III. EMBRITTLEMENT IS AN ISSUE THAT AFFECTS ALL OLDER NUCLEAR REACTORS SO THIS CASE HAS BROAD APPLICATION

Embrittlement of pressure vessels is not a problem confined to the Palisades plant. So the decision in this case will have far-reaching consequences for nuclear safety. That is why it is important to get this case right. Getting it right means conducting a hearing where evidence can be presented and the ASLB can exercise its expertise in making an informed decision.

The pressure vessel constitutes the most important structural component in a nuclear reactor in terms of safety. Diego Ferreno, Inaki Gorrochategui, Frederico Gutierrez-Solana, Degradation Due to Neutron Embrittlement of Nuclear Vessel Steels: A Critical Review about the Current Experimental and Analytical Techniques to Characterise the Material, with Particular Emphasis on Alternative Methodologies (2011). The pressure vessel is a virtually irreplaceable element which is subjected to operating conditions that lead to a progressive degradation over time of its steel casing. Id.

The original design lifetime for nuclear light water reactors is 40 years. So the reactors constructed in the early 1970's have exceeded their designed life, but the licenses for those reactors have been extended for an

additional 20 years. In other words, those reactors are living on borrowed time. That is why it is so important that Entergy not be allowed to set a bad precedent in this case.

Such a precedent would allow a lack of proper testing at the worst age-degraded reactors in the nation, as identified by the Commission in 2013, including Point Beach Unit 2, Indian Point Unit 3, Diablo Canyon Unit 1, Beaver Valley Unit 1, and Davis-Besse. And over the next 20 years or more, with license extensions, that list will certainly grow. This is an unacceptable and unnecessary risk waiting to happen.

Entergy has not explained why it cannot test the coupons, but rather attempts to justify its assertion that the Palisades reactor pressure vessel is safe by extrapolating data from other reactors. Entergy's argument for failing to test coupons is apparently that it didn't test coupons because it claims it doesn't have to. There is no technical or practical reason why the coupons could not be tested. If Entergy is allowed to use extrapolated estimates to justify its risky actions in this case, then other aging reactors will also be allowed to do the same, resulting in a collapsing "house of cards," where succeeding estimates will be based on prior questionable

estimates. The people of Michigan, and the residents near other reactors that are subject to embrittlement, deserve more protection than that.

It is also important to emphasize that Entergy is not relying on the alternative procedure for assuring pressure vessel reliability set out in 10 C.F.R. § 50.61a. That regulation establishes a very detailed procedure that the Commission through its rulemaking process has determined will adequately assure pressure vessel reliability. As the ASLB majority found in this case, instead, Entergy is attempting to rely on an NRC staff guidance document that is still in draft form and an industry standard that has not even been approved by the Commission. The ASLB majority also noted that the staff guidance document says that it may be used if there is no material, i.e., coupons, available for testing. In this case, however, there are more than enough coupons available for testing. Furthermore, as noted above, the staff guidance is in draft form and has not been approved or adopted by the Commission. It should certainly not supercede Commission regulations.

Therefore, Entergy's attempt to avoid following any NRC regulation provides no assurance that the pressure

vessel is safe and reliable. This would indeed be a bad precedent for the Commission to establish.

IV. CONCLUSION

A majority of the ASLB in this case, after applying its expertise and applying the standard for the Intervenors' right to a hearing, decided that the Intervenors are indeed entitled to a hearing on their contention. The Intervenors have more than satisfied the requirements for a valid contention that justifies a hearing. Pressure vessel embrittlement is an issue that has far-reaching consequences. This case will set a precedent that will impact the safety of nuclear power for years to come.

The Commission should deny Entergy's appeal and uphold the ASLB decision granting the Intervenors a hearing.

/s/ *Wallace L. Taylor*

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CERTIFICATE OF SERVICE

Pursuant to 10 C.F.R § 2.305, I certify that, on August 7, 2015, copies of Sierra Club's Amicus Curiae Brief were served upon the Electronic Information Exchange (the NRC's E-Filing System) in the above-captioned proceeding.

/s/ *Wallace L. Taylor*
WALLACE L. TAYLOR