UNITED STATES
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

In re:	Docket Nos. 50-247-LR; 50-286-LR
License Renewal Application Submitted by	ASLBP No. 07-858-03-LR-BD01
Entergy Nuclear Indian Point 2, LLC, Entergy Nuclear Indian Point 3, LLC, and Entergy Nuclear Operations, Inc.	DPR-26, DPR-64 March 17, 2015

STATE OF NEW YORK AND RIVERKEEPER JOINT REPLY IN SUPPORT OF ADMISSION OF THE FEBRUARY 2015 SUPPLEMENT TO PREVIOUSLY-ADMITTED CONTENTION NYS-38/RK-TC-5

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INTRODUCTION

Pursuant to 10 C.F.R. § 2.309(i)(2) and the Scheduling Order of the Atomic Safety and Licensing Board (the Board) dated July 1, 2010, intervenors State of New York (the State) and Riverkeeper Inc. (collectively, intervenors) submit this Joint Reply to the answers of NRC Staff and Entergy opposing intervenors' Joint Motion to Supplement Contention NYS-38/RK-TC-5.[1] Both answers were filed on March 10, 2015, and oppose, for different reasons, intervenors' Joint Motion to Supplement Joint Contention NYS-38/RK-TC-5, filed February 13, 2015.

For the reasons set forth below, the objections raised by NRC Staff and Entergy are without merit, and intervenors' Joint Motion to Supplement Contention NYS-38/RK-TC-5 should be granted in its entirety. Notably, neither NRC Staff nor Entergy has submitted evidentiary materials or expert opinion to support their objections, or to contradict the detailed expert declarations offered by Dr. Richard T. Lahey and Dr. Joram Hopenfeld in support of the motion to supplement. Instead, they raise a variety of narrow arguments that are inapposite at the contention admissibility stage and attempt to distract from the fundamental shortcomings in Entergy's License Renewal Application (LRA) alleged by intervenors.

[1] The Staff and Entergy answers are contained in responsive documents that address both the State's motion to supplement NYS-25 and the State and Riverkeeper's motion to supplement NYS-38/RK-TC-5. *See* "NRC Staff's Answer to (1) State of New York's Motion to Supplement Contention NYS-25, and (2) State of New York and Riverkeeper Inc.'s Joint Motion to Supplement Contention NYS-38/RK-TC-5" (March 10, 2015) (NRC Staff Answer); "Entergy's Consolidated Answer Opposing Intervenors' Motions to Amend Contentions NYS-25 and NYS-38/RK-TC-5 (March 10, 2015) (Entergy Answer). Because Riverkeeper is a party to Joint Contention NYS-38/RK-TC-5, but not Contention NYS-25, intervenors are submitting separate replies in further support of the motions to supplement each contention. In addition, although the intervenors' February 2015 motions contained certain common material (e.g., the declaration of Dr. Richard T. Lahey), the two contentions have different procedural histories and are not identical. NRC Staff and Entergy submitted consolidated answers to those motions, and therefore portions of today's two replies contain common arguments. The significant distinct issues for each contention have been briefed in Point I and Point II of this Reply.

PROCEDURAL HISTORY

Intervenors are seeking to supplement the bases for previously admitted Joint Contention NYS-38/RK-TC-5, which states:

> Entergy is not in compliance with the requirements of 10 C.F.R. §§ 54.21(a)(3) and (c)(1)(iii) and the requirements of 42 U.S.C. §§ 2133(b) and (d) and 2232(a) because Entergy does not demonstrate that it has a program that will manage the affects of aging of several critical components or systems and thus NRC does not have a record and a rational basis upon which it can determine whether to grant a renewed license to Entergy as required by the Administrative Procedure Act.

The Board admitted joint contention NYS-38/RK-TC-5, over objections from Entergy and NRC Staff, in November 2011. *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 and 3), Memorandum and Order (Admitting New Contention NYS-38/RK-TC-5) (Nov. 10, 2011). Thereafter, the Board clarified that "NYS-38/RK-TC-5 is a broadly worded contention questioning whether Entergy 'has a program that will manage the affects of aging of several critical components or systems' and whether the proffered programs provide an adequate 'record and rational basis [to the NRC] upon which it can determine whether to grant a renewed license to Entergy.'" *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 and 3), Order (Granting Entergy's Motion for Clarification of Licensing Board Memorandum and Order Admitting Contentions NYS-38/RK-TC-5) at 2 (Dec. 12, 2011).

In February 2012, Entergy modified its AMP for RVI components, which was further changed through frequent communications with Staff and finally approved in the SSER2 (collectively, the Amended and Revised RVI Plan). Notwithstanding its multi-year development, intervenors review of Amended and Revised RVI Plan revealed several significant shortcomings. Intervenors are now offering additional bases, supported by the declarations of

two expert witnesses: Dr. Richard Lahey and Dr. Joram Hopenfeld. These experts allege that Entergy's Revised RVI Inspection Plan, as approved by NRC Staff in the SSER2, contains significant omissions and is inadequate to address the concerns raised in intervenors' existing contention.

ARGUMENT

I. The Supplement to NYS-38/RK-TC-5 Is Admissible Even Though There Is Some Overlap with Contention NYS-25

Contrary to the argument of NRC Staff, *see* NRC Staff Answer, at 9-14, the proposed supplement to Joint Contention NYS-38/RK-TC-5 is well within the existing scope of the existing contention and is admissible, notwithstanding the fact that the Amended Joint Contention would overlap with the State's Contention NYS-25 in some respects. NRC Staff characterizes Joint Contention NYS-38/RK-TC-5 as limited to challenging Entergy's "commitments to develop certain AMPs in the future," and object to the supplement as an "attempt to recast contention NYS-38 as a challenge to the adequacy of Entergy's Revised AMP[.]" NRC Staff Answer, at 9-13. The distinction drawn by NRC Staff finds no support in the language of contention NYS-38/RK-TC-5, nor in the history of that contention's admission.

Contention NYS-38/RC-TK-5, quoted in full above, alleges that Entergy failed to comply 10 C.F.R. §§ 54.21(a)(3) because it did not "demonstrate that it has a program" to manage aging effects on certain components. One of the original bases for this contention was that "[a]s of August 31, 2011, Entergy's reactor vessel internals aging management program lacked an adequate inspection program." Bases in Support of Joint Contention NYS-38/RK-TC-5, ¶2(d). That basis also described Entergy's submission of an RVI inspection plan the day before new and amended contentions were due, and alleged that the new plan was insufficient to manage the effects of aging, in general because it relied on future commitments to develop AMPs. *Id.* at 2-3.

In the proposed additional bases for Joint Contention NYS-38/RK-TC-5, intervenors maintain that the Revised RVI Inspection Plan still relies on future commitments to develop the details of the AMP in several important respects. *See* February 2015 Supplement to Joint Contention NYS-38/RK-TC-5, ¶2(e). However, the new bases also allege that the Revised RVI Inspection Plan is inadequate for a variety of specific reasons. *See id.* at ¶¶5.1-5.3. These new, specific, inadequacies arise out of Entergy's Amended and Revised RVI Plan as developed by Entergy over the course of almost three years and approved by NRC Staff in the SSER2. Contrary to the argument of NRC Staff, these new bases fall squarely with the admitted joint contention, and are a logical evolution of the contention to respond to Entergy's most recent submissions. *See generally Entergy Nuclear Operations, Inc.*, (Indian Point Units 2 and 3), Memorandum and Order (Ruling on Pending Motions for Leave to File New and Amended Contentions), (July 6, 2011), at 20-28 (admitting additional bases is support of Contention NYS-25 that "alter[ed] the focus of [the] contention from one of omission to one of inadequacy" in response to Entergy's submission of a LRA Amendment 9).

The fact that the amended joint contention may overlap with other contentions is not fatal to the admissibility of the supplemental bases. This Board has previously recognized that Joint Contention NYS-38/RK-TC-5 raises issues that overlap somewhat with Contention NYS-25 and Consolidated Contention NYS-26B/RK-TC-1B, but also noted that "many" of the issues "do not" overlap and that consolidation of the three contentions would be inappropriate. *See Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 and 3), Order (Granting Entergy's Motion for Clarification of Licensing Board Memorandum and Order Admitting Contention NYS-38/RK-TC-5), (Dec. 6, 2011), at 5. Thereafter, in deferring portions of Contention NYS-38/RK-TC-5 to Track 2 of the hearing, the Board again recognized that

"aspects of Contention NYS-38/RK-TC-5 relat[e] to Contention NYS-25[.]" *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 and 3) Order (Denying NRC Staff's Motion for Partial Reconsideration and State of New York/Riverkeeper's Cross-Motion to NRC Staff's Motion for Reconsideration) (April 23, 2012), at 8. The amendment of Joint Contention NYS-38/RK-TC-5 to include specific inadequacies in the Revised and Amended RVI Plan is but an extension of the overlap that has been recognized and condoned by the Board, and is not a reason for refusing to admit the additional bases and the supporting declaration of Dr. Joram Hopenfeld, which has been submitted only in support of the new bases for Joint Contention NYS-38/RK-TC-5.[2]

NRC Staff also objects to the use of the same Declaration from Dr. Richard Lahey to support the supplement to Contention NYS-25 and Joint Contention NYS-38/RK-TC-5. *See* NRC Staff's Answer, at 13. However, nothing in 10 C.F.R. § 2.309 (f) requires an expert witness to specifically delineate which contention each section of his or her declaration supports. This argument is yet another example of NRC Staff's "siloed" thinking with respect to aging management, which attempts to view components, aging degradation mechanisms, and even expert opinions, in isolation. *See* Lahey Declaration, ¶24.

To the extent that some of the evidence submitted at an evidentiary hearing in support of Contention NYS-25 or NYS-26B/RK-TC-1B might also be relevant to contention NYS-38/RK-TC-5, the Board may structure the evidentiary hearing so as to avoid duplicative or repetitive submissions. *See, e.g., Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units

[2] Notably, NRC Staff's position that Intervenors are seeking to litigate the "very same issues" in two different contentions is belied by the fact that Dr. Hopenfeld has provided distinct expert support only for Intervenors' supplemental bases for Joint Contention NYS-38/RK-TC-5, and is otherwise not involved in Contention NYS-25. Notably, NRC Staff's position and request that the Board reject Intervenors' supplemental bases for Joint Contention NYS-38/RK-TC-5 would exclude critical issues that have been raised by Dr. Hopenfeld with respect to Joint Contention NYS-38/RK-TC-5.

2 and 3), Order (Granting Entergy's Motion for Clarification of Licensing Board Memorandum and Order Admitting Contention NYS-38/RK-TC-5), (Dec. 6, 2011), at 5 (directing the parties to "first file evidence as it relates to either NYS-25 and NYS-26B/RK-TC-1B and, if relevant, reference those filings in their NYS-38/RK-TC-5 materials").

II. Intervenors' Supplement to Joint Contention NYS-38/RK-TC-5 Is Admissible

Entergy's objections to the Joint Motion to Supplement generally conflate the evidentiary requirements for contention admissibility with the level of evidence required to prove a contention after an evidentiary hearing. Under 10 C.F.R. § 2.309(f), an admissible contention must:

> (1) provide a specific statement of the legal or factual issue sought to be raised; (2) provide a brief explanation of the basis for the contention; (3) demonstrate that the issue raised is within the scope of the proceeding; (4) demonstrate that the issue raised is material to the findings the NRC must make to support the action that is involved in the proceeding; (5) provide a concise statement of the alleged facts or expert opinions, including reference to specific sources and documents, that support the petitioner's position and upon which the petitioner intends to rely at hearing; and (6) provide sufficient information to show that a genuine dispute exists with regard to a material issue of law or fact, including references to specific portions of the application that the petitioner disputes, or in the case when the application is alleged to be deficient, the identification of such deficiencies and supporting reasons for this belief.

Entergy Nuclear Operations, Inc., (Indian Point Units 2 and 3), Memorandum and Order (Ruling on Petitions to Intervene and Requests for Hearing), LBP 08-13, 68 N.R.C. 43, 60-61 (July 31, 2008). The NRC's "contention rules require reasonably specific factual and legal allegations at the outset to assure that matters admitted for hearing have at least some minimal foundation, are material to the proceeding, and provide notice to the opposing parties of the issues they will need to defend against." *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.*

(Pilgrim Nuclear Power Station), CLI-10-11, 71 N.R.C. 287, 309 (March 26, 2010) (internal quotation marks and citations omitted). "Determining whether the contention is adequately supported by a concise allegation of the facts or expert opinion is not a hearing on the merits." 68 N.R.C. at 63; *see Sierra Club v. USNRC*, 862 F.2d 222, 226 (9th Cir. 1988) ("In passing on the admissibility of a contention . . . it is not the function of a licensing board to reach the merits of [the] contention." [internal quotations and citation omitted]). [3] An intervenor is not required "to make its case at this stage of the proceeding, but rather to indicate what facts or expert opinions, be it one fact or opinion or many, of which it is aware at that point in time which provide the basis for its contention." Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, 54 Fed. Reg. 33,168, 33,170 (Aug. 11, 1989). The Board "do[es] not weigh the evidence" at this stage of the proceeding. *Entergy Nuclear Operations, Inc.*, (Indian Point Units 2 and 3), Memorandum and Order (Ruling on Pending Motions for Leave to File New and Amended Contentions), (July 6, 2011), at 28.

The Commissioners recently stated that a contention is properly admitted if the intervenor provides "application-specific support for the factual assertions in its contention," even if the contention contradicts NRC Staff guidance. *Entergy Nuclear Operations, Inc.* (Indian Point Units 2 and 3), Memorandum and Order, ___ N.R.C. ___, CLI-15-6 (March 9, 2015), at 18-19.

[3] NRC precedent on this is clear and voluminous. *See, e.g., Louisiana Energy Services, L.P.*, CLI-04-35, 60 N.R.C. 619, 623 (2004) (finding Intervenors are not asked to prove their case at the contention stage, but simply to provide sufficient alleged factual or legal bases to support the contention); *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-82-106, 16 N.R.C. 1649, 1654 (1982) (finding that a licensing board should not address the merits of a contention when determining its admissibility); *USEC, Inc.* (American Centrifuge Plant), LBP-05-28, 62 N.R.C. 585, 596-97 (2005) (finding that determining whether a contention is adequately supported by a concise allegation of the facts or expert opinion is not a hearing on the merits, and that a petitioner does not have to prove its contention at the admissibility stage); *Washington Public Power Supply System* (WPPSS Nuclear Project No. 2), ALAB-722, 17 N.R.C. 546, 551 n.5 (1983) (All that is required for a contention to be acceptable for litigation is that it be specific and have a basis; whether or not the contention is true is left to litigation on the merits in the licensing proceeding).

The NRC noted that whether or not the factual allegations set forth in the contention "adequately counter" the Staff's guidance "is a merits determination." *Id.* at 18.

Entergy states that a central issue here is whether or not it has demonstrated that the effects of aging will be adequately managed so that the intended functions of the components in question (vessel and internal components) will be maintained throughout the 20 year period of extended operation.[4] When interpreting this standard as set forth in 10 C.F.R. § 54.21(c)(1)(iii), the Board has noted that "[t]he regulation does not specify exactly how this demonstration will be accomplished." *Entergy Nuclear Operations, Inc.*, (Indian Point Units 2 and 3), Memorandum and Order (Ruling on Pending Motions for Leave to File New and Amended Contentions) (July 6, 2011), at 28.

Here, intervenors and their experts have identified genuine and material disputes with Entergy's approach to RVI components at Indian Point. Intervenors have submitted detailed expert affidavits alleging specific shortcomings in the most recent version of Entergy's RVI AMP, as approved by the SSER2. Some of the concerns include:

a. The Revised and Amended RVI Plan postpones the development of several important aspects, including the acceptance criteria for baffle former bolt inspections and the evaluation of CUF_{en} values for IP3's RVI components. Lahey Declaration, ¶¶27; Hopenfeld Declaration, ¶¶24-25.

b. Entergy's evaluation of component fatigue life is flawed, as it is based on outdated and incorrect assumptions and fails to include an "error analysis" to reflect uncertainties in the calculations. *See* Lahey Declaration, ¶¶21-22; Hopenfeld Declaration, ¶¶12-23. Accordingly, a CUF_{en} value of less than 1.0 does not necessarily mean that a component will not fail during the period of extended operation. Lahey Declaration, ¶22; Hopenfeld Declaration, ¶19.

These expert opinions support intervenor's position that Entergy's Amended and Revised RVI Plan does not adequately manage the effects of aging on RVI components, as required by 10

[4] Entergy cites 10 C.F.R. § 54.21(a)(3). Entergy's Answer, at 10 n. 49. Intervenors have pointed to a nearly identical standard contained in 10 C.F.R. § 54.21(c)(1)(iii).

C.F.R. § 54.21. In response, Entergy has not submitted any expert declaration or report contradicting the substance of intervenors' expert declarations. Instead, Entergy has interposed a variety of procedural arguments, most of which amount to a dispute over a material issue of fact – questions that should be resolved at the evidentiary hearing. *See* Entergy's Answer, at 18-27.

Entergy contends that intervenors failed to "accurately describe the RVI AMP" in stating that Entergy has "reaffirmed that it will not take preventative actions" to address the effects of aging on RVIs. *See* Entergy's Answer, at 21-22. However, Entergy's own February 2012 submission, which intervenors quoted directly, states that "[t]he Reactor Vessel Internals Program is a condition monitoring program that *does not include preventative actions*." Proposed Supplement to Contention NYS-25, ¶3.8, quoting Attachment 1 to NL-12-037, at 5 (emphasis added). [5] To the extent that Entergy alleges that the RVI program is nonetheless sufficient to manage the effects of aging under 10 C.F.R. § 54.21, this argument goes to the merits of the supplemental bases, not their admissibility.

Contrary to Entergy's claim, Dr. Hopenfeld's position that the Westinghouse Environmentally Assisted Fatigue (EAF) analyses (or $CUF_{en)}$ fail to adequately address component surface changes is more than adequately supported. *See* Entergy's Answer, at 32. To begin with, Entergy's claim that Dr. Hopenfeld's position is "unsupported, as none of the documents Dr. Hopenfeld relies upon are clearly cited or attached" completely mischaracterizes intervenors' burden at the contention admissibility stage. *See id.* As described above, it is well-established that an intervenor is not expected or required to prove its claims when initially proffering a contention, or, in this case, supplemental bases to an already admitted contention. In fact, the factual support necessary to meet contention admissibility standards need not be in

[5] Indeed, Entergy's Answer re-confirms this fact when it states "the RVI AMP is a condition monitoring program focused on inspections for the effects of aging." Entergy Answer, at 2.

formal evidentiary form, nor be as strong as that necessary to withstand a motion for summary disposition; instead, what is required is "a minimal showing that material facts are in dispute, thereby demonstrating that an 'inquiry in depth' is appropriate." *Gulf States Utilities Co.* (River Bend Station, Unit 1), CLI-94-10, 40 N.R.C. 43, 51 (1994) (citing Final Rule, Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, 54 Fed. Reg. 33,168, 33,171 (Aug. 11, 1989)).

The declaration provided by Dr. Hopenfeld in support of the supplemental bases for Contention NYS-38/RK-TC-5 clearly meets, and in fact, well surpasses, such a threshold. *See* Hopenfeld Declaration at ¶ 18. Notably, Entergy does not specify what is so "unclear" about the references cited by Dr. Hopenfeld in his declaration, and, as Entergy acknowledges, such cited references have been disclosed pursuant to the parties' mandatory disclosure obligations in this proceeding. *See* Entergy's Answer, at 32 n. 172.

In any event, Entergy's claim that Dr. Hopenfeld provided "no support" for his position regarding the non-conservative nature of Entergy's EAF analyses is simply incorrect. *See* Entergy's Consolidated Answer, at 32 n. 172. In his declaration, Dr. Hopenfeld relied upon his decades of industry experience as well as cited references to explain at length the deficiencies with the CUF_{en} analyses undertaken on behalf of Entergy. *See* Hopenfeld Declaration at ¶ 18. Dr. Hopenfeld's statements regarding Entergy's clear failure to consider surface defects in relevant components is clearly based on his education, knowledge, experience, and training, as well as documented references that have been disclosed in this proceeding. Dr. Hopenfeld's position is certainly not based on a "gut feeling" as Entergy insinuates. Entergy Answer, at 32. In fact, this quote by Dr. Hopenfeld cited by Entergy was made in relation to an entirely different technical contention, *at* an adjudicatory hearing, and is certainly inapposite to Dr. Hopenfeld's

position with respect to fatigue of RVI components at Indian Point. Further, while Dr. Hopenfeld's prior statements clearly have no bearing upon his position in relation to the clearly distinct issues at hand, the basis for a contention may not be undercut, and the contention thereby excluded, through an attack on the credibility of the expert who provided the basis for the contention. *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), LBP-82-98, 16 N.R.C. 1459, 1466 (1982), citing *Houston Lighting and Power Co.* (Allens Creek Nuclear Generating Station, Unit 1), ALAB-590, 11 N.R.C. 542 (1980).

In short, Dr. Lahey and Dr. Hopenfeld have laid out their concerns with the Amended and Revised RVI Plan in a detailed expert declaration that refers to specific portions of the application and supporting documents. The State and its expert have pointed to specific, concrete shortcomings in Entergy's most recent RVI AMP, going well beyond the "concise statement" or "minimal foundation" that are required at this stage. 10 C.F.R. § 2.309(f)(1)(v); 71 NRC 287, 309.

Entergy is also incorrect in claiming that intervenors seek to challenge NRC regulations by suggesting that component repair or replacement may be appropriate. Entergy's Answer, at 27-30. As the Board here has said, Entergy's argument that intervenors cannot seek aging management actions that are not specifically set forth by regulation "misse[s] the point[.]" *Entergy Nuclear Operations, Inc.*, (Indian Point Units 2 and 3), Memorandum and Order (Ruling on Pending Motions for Leave to File New and Amended Contentions) (July 6, 2011), at 28. If part replacement or repair is required to adequately manage the effects of aging, then it is an appropriate aging management response under the regulation. Entergy's argument that part replacement is not contemplated by the regulation is tantamount to claiming that NRC Staff, the Atomic Safety and Licensing Board, and the NRC Commissioners themselves lack the

regulatory authority to require Entergy to replace fatigued parts, even if it is necessary to ensure the continued safe operation of the reactor. Indeed, Entergy, by submitting a formal commitment to replace the split pins in IP2 during the second refueling outage in its period of extended operation, concedes that component replacement may be an appropriate aging management action under 10 C.F.R. § 54.21(a)(3). *See* SSER2, at 3-36, A-15 (Commitment No. 50). Entergy's Fatigue Monitoring Program also contemplates that repair or replacement may be an appropriate corrective action for components that have a CUF_{en} value approaching unity. *See* LRA, Commitment 49 (referenced in SSER2 at A-15).

Entergy also suggests that intervenors should have attached the various technical reports relied upon by their experts. *See* Entergy's Answer, at 19 n 102, 27, 32. While the Board's Scheduling Order states that "[i]f written testimony, an affidavit, or a motion or pleading of any kind seeks to have the Board rely on the contents of a report, website, NUREG, guidance document, or other document of any kind . . . then a copy of that document, or the relevant portion thereof, shall be submitted with and attached to the pleading," Scheduling Order, at 17, this provision does not require intervenors to attach reference documents and prove their merits case now at the contention admissibility juncture. Not only is a requirement to attach every supporting document to a newly proffered contention or bases unprecedented in this particular proceeding, it is also entirely inconsistent with the well-established burdens that intervenors are required to meet at the contention admissibility stage; such a requirement would be tantamount to a hearing on the papers, which is precisely what has been rejected in countless NRC cases. *See* footnote 3, *supra*. Rather, as previously briefed, at the contention admissibility phase the intervenors' burden is merely to identify the existence of a genuine dispute of material fact based on facts or expert opinion, including "*references* to the specific sources and documents on which

the [intervenor] intends to rely" – the reports or documents relied upon by the experts are not required for a contention to be admitted. *See* 10 C.F.R. § 2.309(f)(1)(v).

III. MRP 227-A Is Not a Regulation and Does Not Preclude the Supplemental Bases

Entergy argues that intervenors' motion is inadequate because the Revised AMP Plan complies with MRP-227-A, and the proposed new bases do not challenge the technical bases of MRP-227-A. *See* Entergy Answer, at 18-19. As an initial matter, MRP-227-A is not a legally binding regulation. *See Perez v. Mortgage Bankers Assn.*, ___ U.S. ___, Slip Op. at 2. (March 9, 2015) (noting that only rules promulgated according to the notice-and-comment provisions of the Administrative Procedures Act have "the force and effect of law"). Rather, MRP-227-A is a guidance document prepared by representatives from the regulated industry and approved by NRC Staff. Moreover, as both the NRC and this Board have recognized in this proceeding, the alleged compliance of Entergy's LRA with guidance issued by NRC Staff is not a basis for refusing to admit a contention alleging that the LRA fails to comply with the applicable regulations. *See Entergy Nuclear Operations, Inc.*, (Indian Point Units 2 and 3) Memorandum and Order, CLI-15-6 (March 9, 2015), at 18-19; *Entergy Nuclear Operations, Inc.*, (Indian Point Units 2 and 3), Memorandum and Order (Ruling on Pending Motions for Leave to File New and Amended Contentions), (July 6, 2011), at 27-28.

Furthermore, Entergy criticizes intervenors for not accepting MRP-227-A, a document that it states took the industry 10 years to develop. *See* Entergy Brief, at 5. Rather than undermine the State's concern, the long development confirms the significance of the issue, and industry's difficulty in developing an approach to it. Also, the lengthy development phase of MPR-227-A – followed by the 30 month review in this proceeding – does not mean that the guidance report addressed all aging management degradation mechanisms. Moreover,

intervenors, supported by knowledgeable experts, are entitled to contest the adequacy of Entergy's proposed Amended and Revised RVI Plan and its reference to the MRP-227-A report.

In short, guidance documents prepared by Staff and industry are not the equivalent of generally applicable regulations adopted through the rulemaking process prescribed by the Administrative Procedure Act. States, intervenors, and their experts are entitled to challenge the application of a guidance document to a facility that could affect the State, its citizens, and environment. MRP-227-A does not automatically entitle Entergy to a 20 year operating license.

IV. The State's Supplemental Bases and Evidences Related to CUF_{en} Evaluations Are Within the Scope of Entergy's Amended and Revised RVI Plan and the SSER2, and Are Therefore Timely

Entergy is incorrect in arguing that the supplemental bases referencing non-RVI CUF_{en} evaluations are outside the scope of the SSER2 and therefore untimely. *See* Entergy's Answer, at 16-17. A quick overview of the history of Staff and Entergy's communications regarding CUF_{en} evaluations for RVI components belies Entergy's apparently general claim that SSER2 "does not evaluate or approve any CUF_{en} calculations[.]" Entergy's Answer at 17.

In October 2012, Entergy advised NRC Staff that it intended to use the RVI Program to manage the cumulative fatigue damage aging effects for RVI components that have a time limited aging analysis that determined CUF. Attachment 1 to Entergy Letter NL-12-140 (discussed in SSER2 at 3-52). Entergy subsequently changed its position and on May 7, 2013, advised Staff that it would rely instead on the Fatigue Monitoring Program to manage the effects of fatige on the RVI components during the period of extended operation. *See* Attachment 1 to NL-13-052, at 8-9. As part of this revision, Entergy also proposed new Commitment 49, under which the company proposed to perform EAF analysis for RVI by recalculating CUF values to include effects of the reactor coolant environment. *Id.*; Attachment 2 to NL-13-052, at 20.

Entergy further indicated that it would undertake corrective action, including further CUF_{en} reanalysis and/or repair or replacement prior to the CUF_{en} reaching 1.0. *Id.* Stated differently, Entergy proposed to take the CUF analysis used for other locations in the reactor coolant pressure boundary and apply or "import" that type of analysis into the category of reactor vessel internal components. In the November 2014 SSER2, NRC Staff acknowledged and found acceptable Entergy's proposal, including Entergy's commitment to recalculate CUF_{en} values for RVI components pursuant to Commitment 49. SSER2, at 3-53. As such, Commitment 49 and its agreement to use CUF_{en} measurements for reactor vessel components is firmly within the scope of the SSER2, Entergy's Amended and Revised RVI Plan, and Joint Contention NYS-38/RK-TC-5.

It appears that, in lieu of developing a comprehensive program to manage the full range of RVI aging mechanisms, including irradiation induced embrittlement, NRC Staff and Entergy have agreed merely to extend Entergy's program for metal fatigue analyses to include CUF_{en} analyses of RVIs. However, intervenors and their experts contend that CUF_{en} analyses, even if coupled with fatigue monitoring, are not an adequate substitute for a detailed program designed to identify and manage aging components that may be highly embrittled and subject to sudden failure. Moreover, in order to properly monitor and track transient cycles and fatigue, intervenors contend that Entergy must have a reliable method for calculating CUF_{en}. Dr. Lahey has previously voiced his concerns with the method used to calculate CUF_{en} values for non-internal components in connection with Consolidated Contention NYS-26B/RK-TC-1B. [6] *See* Lahey Report in Support of Contention NYS-25 and Consolidated Contention NYS-26B/RK-

[6] However, Dr. Lahey has previously objected to the failure to treat control rods as reactor vessel internals. *See, e.g.*, Lahey Report in Support of Contention NYS-25 and Consolidated Contention NYS-26B/RK-TC-1B (December 20, 2011), ¶25& n5.

TC-1B (December 20, 2011), ¶¶30-37 ("Lahey Report"). Dr. Hopenfeld, likewise, raised a host of concerns related to Entergy's methodology for calculating CUF_{en} for non RVI components. *See* Report of Dr. Joram Hopenfeld in Support of Contention Riverkeeper TC-1B – Metal Fatigue (December 19, 2011), at 4-21. Among other things, these concerns have included questions about the WESTEMS approach and lack of any error analysis in Entergy's approach to CUF_{en} to date. According to the experts, these concerns raise serious questions about the reliability of the approach to CUF_{en} at Indian Point. These concerns apply with equal or more force to the use of the same CUF_{en} calculation methods for RVI components – some of which are comparatively more fragile and subject to harsher conditions when compared to the externals. Lahey Report ¶¶17-20.

Entergy notes that Dr. Lahey's discussion of certain CUF_{en} values and the lack of error analysis cited reports for non-internal components, *see* Entergy's Answer at 16-17 referencing Lahey Decl. at ¶ 21-22, but this does not detract from the admissibility of the proposed supplemental bases for Joint Contention NYS-38/RK-TC-5. Rather, Dr. Lahey referred to those reports to illustrate his concern – in the context of RVI analyses and Commitment 49 – about the lack of error analysis and his concerns about WESTEMS.

Finally, the fact that Entergy is not proposing to repair or replace components with extremely high CUF_{en} values illustrates the degree to which Entergy appears willing to operate its Indian Point reactors with aging components under conditions that come extremely close to exceeding the component's fatigue design basis. Allowing a safety-related system, structure, or component to run-to-failure is not an acceptable aging management plan. Given Entergy's eight year iterative approach to aging management of RVI components, from its inception in the 2007 LRA as a mere commitment to evaluate a nascent industry concept to its current proposal that

recently incorporated the CUF_{en} approach in an attempt to address age-related degradation in various components inside the reactor vessels, the State's reference to Entergy's fatigue analyses in its proposed amended contention is both timely and appropriate.

CONCLUSION

For the reasons described above, intervenors' joint motion to supplement Joint Contention NYS-38/RK-TC-5 should be granted in its entirety.

Respectfully submitted,

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March 17, 2015

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

In re:	Docket Nos. 50-247-LR and 50-286-LR
License Renewal Application Submitted by	ASLBP No. 07-858-03-LR-BD01
Entergy Nuclear Indian Point 2, LLC, Entergy Nuclear Indian Point 3, LLC, and Entergy Nuclear Operations, Inc.	DPR-26, DPR-64 March 17, 2015

CERTIFICATE OF SERVICE

I hereby certify that on March 17, 2015, copies of the "State of New York and Riverkeeper's Reply in Support of Intervenors' Motion for Leave to Supplement Previously-Admitted Contention NYS-38/RK-TC-5" were served upon the Electronic Information Exchange (the NRC's E-Filing System), in the above captioned proceeding.

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Dated at Albany, New York
this 17th day of March 2015