UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

In the Matter of	)	
	)	
ENTERGY NUCLEAR OPERATIONS, INC.	)	Docket Nos. 50-247-LR/286-LR
	)	
(Indian Point Nuclear Generating	)	
Units 2 and 3)	)	

NRC STAFF'S REPLY TO STATE OF NEW YORK'S
ANSWER IN OPPOSITION TO STAFF PETITION
FOR REVIEW OF LBP-13-13 AND LBP-11-17

April 9, 2014

TABLE OF CONTENTS

INTRODUCTION 1

DISCUSSION... 1

I. The Commission Should Undertake Review of the Board's Decision in LBP-13-13, Regarding Contention NYS-8 (Transformers)............................ 1

A. New York Misapplies the Concept of Monitorability.. 2

B. The Board Improperly Dismissed Long-Standing NRC Regulatory Guidance. 5

C. New York's Argument Concerning the Contention's Admissibility Is Untenable in Light of *Seabrook* 5

II. The Commission Should Undertake Review of the Board's Decision in LBP-11-17 Regarding Contention NYS-35/36 (SAMAs) 6

A. New York Mischaracterizes the Basic NEPA Issues Presented in the Staff's Petition for Review 6

B. The Board's Decision in LBP-11-17 Is Ripe for Review....................................... 8

C. The Staff's Petition for Review of LBP-11-17 Is Timely 9

CONCLUSION 10

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INTRODUCTION

Pursuant to 10 C.F.R. § 2.341(b)(3), the staff of the U.S. Nuclear Regulatory Commission ("Staff" or "NRC Staff") hereby files its reply to the State of New York's ("New York") answer to the Staff's petition for review of the Atomic Safety and Licensing Board's ("Board") decisions regarding Contentions NYS-8 (Transformers) and NYS-35/36 (Cost-Beneficial SAMAs).[1] For the reasons set forth below, the Staff submits that New York's Answer fails to show any reason why the Commission should not undertake review of the Board's decisions regarding Contentions NYS-8 and NYS-35/36.

DISCUSSION

I. The Commission Should Undertake Review of the Board's Decision in LBP-13-13, Regarding Contention NYS-8 (Transformers)

In its Answer, New York asserts that the standard for reversing a Board decision based on factual grounds is high, and that this standard has not been satisfied by the petitions for

[1] *See* (1) "State of New York's Answer to Entergy and Staff Petitions for Review of Atomic Safety and Licensing Board Decisions LBP-08-13 and LBP-13-13 with Respect to Contention NYS-8 and for Interlocutory Review of LBP-10-13 and LBP-11-17 with Respect to Contention NYS-35/36" (Mar. 25, 2014) ("New York's Answer"); (2) "NRC Staff's Petition for Review of LBP-13-13 in Part (Contentions NYS-8 and CW-EC-3A), and LBP-11-17 (Contention NYS-35/36)" (Feb. 14, 2014) ("Staff Petition"); (3) Applicant's Petition for Review of Board Decisions Regarding Contentions NYS-8 (Electrical Transformers), CW-EC-3A (Environmental Justice) and NYS-35/36 (SAMA Cost Estimates)" (Feb. 14, 2014) ("Applicant's Petition").

review filed by the Staff and Applicant.[2] While New York is correct that the standard for overturning a Board's factual findings is high, that standard has been satisfied here. Through extensive testimony and documentary evidence (including long-standing regulatory guidance), the Staff and Entergy Nuclear Operations, Inc. ("Applicant" or "Entergy") demonstrated that transformers operate via a change in state, and are directly and readily monitorable for performance and condition.[3] In light of that evidence, coupled with long-standing Staff guidance that transformers are active components,[4] the Board's decision to the contrary in LBP-13-13[5] was clearly erroneous and should be reversed.[6]

A. New York Misapplies the Concept of Monitorability

As set forth in the Statement of Consideration that accompanied the Commission's license renewal regulations, active components are components that are readily monitorable for performance or condition.[7] The evidence presented by the Staff and Entergy established that

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[2] New York's Answer at 16-17.

[3] Staff Petition at 16-18; Entergy Petition at 15-18.

[4] *See* (1) Letter from C. Grimes to D. Walters (Ex. ENT000097) ("Grimes Letter"); (2) Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants (NUREG-1800, Rev. 2) ("SRP") (Ex. NYS000161) at 2.1-26; (3) Regulatory Guide 1.188, "Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses," Rev. 1 (Sept. 2005) (Ex. ENT000099) at 4 and 7*; cf.* NEI-95-10, Industry Guideline for Implementing the Requirements of 10 CFR Part 54 – The License Renewal Rule, Rev. 6 (June 2005) (Ex. ENT000098), at C-11 – C-14; Staff Petition at 11-15.

[5] *Entergy Nuclear Operations, Inc*. (Indian Point Nuclear Generating Units 2 and 3), LBP-13-13, 78 NRC __ (Nov. 27. 2013) (slip op.).

[6] New York states that its Answer "incorporates by reference" its evidence and pleadings, and the transcript of the proceeding. New York's Answer, at 17 n.77. Such incorporation by reference is impermissible, in that it would cause its Answer to exceed the page limit established for answers to petitions for review, and would preclude the Staff and Commission from being able to address any such matters that are not explicitly discussed in New York's Answer. *See, e.g.*, *Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-10-9, 71 NRC 245, 278 n.205 (2010).

[7] Final Rule, "Nuclear Power Plant License Renewal; Revisions," 60 Fed. Reg. 22,461, 22,477 (May 8, 1995) ("SOC for License Renewal") (Ex. NYS000016) ("[T]he Commission concluded that structures and components that perform active functions can be generically excluded from an aging management review on the basis of performance or condition monitoring programs.… For example, a pump or valve has moving parts, an electrical relay can change its configuration, and a battery changes

transformers are readily monitorable for both performance and condition.[8] Further, the SOC provides that for active components like pumps, valves, electrical relays, and transistors, "performance or condition of these components is readily monitored,"[9] and "direct verification" of their required functions is practical.[10] When a transformer fails to perform, that failure is obvious and readily detectable; contrary to New York's view, the ability to detect gross failure is not "irrelevant"[11] – rather, it is a defining characteristic of an active component. In contrast, passive components "generally do not have performance and condition characteristics that are as readily monitorable as those that perform active functions."[12] Indeed, the inability to directly and readily detect failure was one of the Commission's reasons for requiring that passive components be subject to aging management review.[13] Such is not the case for transformers.

Moreover, the two monitorability criteria are inter-related: Transformer performance can give indications of condition.[14] The Board discounted the value of condition monitoring for transformers, however, stating that the tests cited by the Staff and Entergy would not "be

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its electrolyte properties when discharging. Therefore, the performance or condition of these components is readily monitored"). *See also id.* at 22,469, 22,475, and 22,478.

[8] Staff Pre-Filed Testimony (Ex. NRC000031) at 11-20; Entergy Pre-Filed Testimony (Ex. ENTR00091) at 40, 96-104; Transcript ("Tr.") at 4250-55, 4259-61, 4263-64, 4267-60, 4270-71, 4275, 4278-81, 4409-12.

[9] SOC for License Renewal, 60 Fed. Reg. at 22,477.

[10] *Id.* at 22,471.

[11] New York's Answer at 22.

[12] SOC for License Renewal, 60 Fed. Reg. at 22,477.

[13] *Id.* at 22,471 ("Passive functions, such as pressure boundary and structural integrity are generally verified indirectly, by confirmation of physical dimensions or component physical condition").

[14] New York asserts, incorrectly, that witnesses for the Staff and Entergy "admitted that monitoring a transformer's electrical performance does not give an indication of the transformer's internal condition." New York's Answer at 27. On the contrary, Staff witness Sheila Ray testified that current and voltage give some indication of the internal condition of a transformer and that other tests can be utilized to provide more exact information. Tr. at 4266-68. Entergy witness Thomas McCaffrey testified that while "[t]ypically, voltage is not used as an aging…criteria for determining its life", voltage and current can indicate degradation. Tr. at 4270-71.

successful in consistently tracking the progressive degradation of transformers."[15] But this is not the proper criterion for judging the efficacy of condition monitoring. As the SOC stated, "an appropriate license renewal review would ensure that licensee programs adequately monitor performance or condition in a manner that allows for the timely identification and correction of degraded conditions."[16] Thus, if existing programs adequately monitor performance or condition such that degradation can be timely identified and corrected, no AMR is required.[17]

Instead of applying this standard, the Board developed and applied a new and unwarranted test for monitorability: In its view, if a component cannot be monitored "to predict impending failure [it cannot] realistically be considered to be 'readily' monitorable."[18] New York now seeks to distance itself from this Board pronouncement: It argues that the Board did not intend to say that monitoring must be able to predict failure and that, instead, the Board meant to say that "existing monitoring programs must yield data that can be used to identify and correct degraded conditions that may cause failure, so that failure can be prevented."[19] This argument as to the Board's intent has no basis, and is belied by the plain language that the Board used (as quoted above) and restated several times in its decision.[20]

Indeed, if the Board had applied what New York now asserts is the proper test – that a component is readily monitorable if it can be monitored to identify and correct age-related degradation prior to failure – then the Board would have had to rule in favor of the Staff and Entergy: As the petitions for review demonstrated, the Staff and Entergy presented voluminous

[15] LBP-13-13, slip op. at 232.

[16] SOC for License Renewal, 60 Fed. Reg. at 22,469.

[17] *Id.* at 22,472.

[18] LBP-13-13, slip op. at 220 (emphasis added).

[19] New York's Answer at 24.

[20] LBP-13-13, slip op. at 232, 234-35, 253, and 257-58.

testimony and documentary evidence of existing transformer monitoring programs that are used to ensure the timely identification and correction of degraded conditions.[21]

B. The Board Improperly Dismissed Long-Standing NRC Regulatory Guidance.

New York asserts that the Staff and Applicant incorrectly argue "that the Board's decision departs from established law because it dismisses longstanding regulatory guidance."[22] New York is wrong, on two counts. First, New York points to no statement by the Staff or Applicant to the effect that guidance documents are binding as a matter of law – and as far as we know, no such statement was made. Second, the Board was obliged to give "special weight" to the agency's regulatory guidance[23] -- but in fact, the Board gave absolutely no weight to that guidance, finding the guidance (originating in the 1997 Grimes Letter) to be invalid in that it did not contain sufficient "technical justification."[24] Contrary to New York's view,[25] the Board's outright dismissal of this regulatory guidance was clearly erroneous.

C. New York's Argument Concerning the Contention's Admissibility Is Untenable in Light of *Seabrook*.

New York cites a Draft Request for Additional Information ("Draft RAI") to justify its failure to provide expert support for the admission of its contention. That argument is

[21] New York states that the Board correctly found that the Staff's and Entergy's position that transformers are active components "runs counter to the prevailing view of the electrical engineering community." New York's Answer at 21. However, the only evidence cited by the Board as to "the electrical engineering community's" "prevailing view" was a terse conclusory statement by Dr. Degeneff. *See* LBP-13-13, slip op. at 215. Dr. Degeneff provided no references in support of that statement. Moreover, his statement and the Board's reliance thereon was directly controverted by the testimony of five expert witnesses for the Staff and Entergy with a combined total of over 149 years of experience working with electrical systems, and Staff guidance dating back to 1997. The Board's reliance on Dr. Degeneff's statement was thus unwarranted in light of the substantial evidence of record to the contrary.

[22] New York's Answer at 33.

[23] *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 314 n.78 (2012).

[24] LBP-13-13, slip op. at 214, 231, 236, and 253.

[25] *See* New York's Answer at 35 ("the Board gave appropriate weight to the Staff's guidance" and then "appropriate[ly] dismiss[ed] that guidance as conflicting with the NRC regulations").

misplaced. New York misreads a passage in the Draft RAI to state that transformers are passive and subject to AMR.[26] However, as the Commission made clear in *Seabrook*, that passage merely identified the power pathway needed for compliance with the station blackout rule (which is within the scope of license renewal); it did not identify "active" versus "passive" components.[27] As the Commission observed in *Seabrook*, "That system includes several components, including transformers. But the guidance does not distinguish – or discuss at all – which of those components perform active or passive functions (or some combination thereof)."[28] In sum, the Draft RAI does not support the contention's admissibility.

II. The Commission Should Undertake Review of the Board's Decision in LBP-11-17 Regarding Contention NYS-35/36 (SAMAs).

In its Answer, New York misstates the arguments presented in the Staff's and Applicant's Petitions and complicates the issues presented for Commission review. A plain reading of the Board's decision in LBP-11-17[29] and the Staff's and Applicant's Petitions demonstrates that New York's arguments are unfounded and should be rejected. Further, New York's arguments concerning the ripeness and timeliness of the Petitions concerning LBP-11-17 cannot be reconciled with the facts, which show that review of that decision is now appropriate.

A. New York Mischaracterizes the Basic NEPA Issues Presented in the Staff's Petition for Review.

The Staff's petition for review demonstrated two fundamental legal errors in the Board's decision on Contention NYS-35/36: (1) Contrary to the Board's decision in LBP-11-17, NEPA does not require consideration of final engineering project cost information in a severe accident

[26] New York's Answer at 7. New York's quotation of the Draft RAI deleted all of that document's references to components in the station blackout power path, save one: Transformers. *Id*. Having made those deletions, New York incorrectly reads the Draft RAI to suggest that transformers are passive. *Id.*

[27] *Seabrook,* CLI-12-5, 75 NRC at 321-22.

[28] *Id*. at 322.

[29] *Entergy Nuclear Operations, Inc*. (Indian Point, Units 2 and 3), LBP-11-17, 74 NRC 11, *petition for interlocutory review denied*, CLI-11-14, 74 NRC 801 (2011).

mitigation alternatives (SAMA) analysis, where reasonable estimates of SAMA implementation costs have already been provided,[30] and (2) the Board failed to address the Staff's augmented FSEIS explanation as to why Entergy's cost-beneficial SAMAs need not be implemented as a condition for license renewal.[31] Significantly, New York did not address these arguments in its Answer. Rather, New York mistakenly claims – without citation to a single statement in either the Staff's or Applicant's Petitions – that "[t]he crux of the petitions for review is that the SAMA analysis mandated as part of the NEPA review required in license renewal need not be completed for any SAMA not within Part 54's aging management provisions."[32]

In fact, contrary to New York's unsupported conclusions, the Staff has explicitly recognized that NEPA requires consideration of all potentially cost-beneficial SAMAs, not only those that relate to license renewal – and, indeed, the Staff's FSEIS for Indian Point did consider all such SAMAs.[33] Further, contrary to New York's claims, what the Staff stated was that (a) NEPA and the Commission's NEPA-implementing regulations in 10 C.F.R. Part 51 do not require the implementation of cost-beneficial SAMAs (whether modification of the Applicant's facility or its procedures), and (b) the Commission's license renewal regulations in 10 C.F.R. Part 54 do not require implementation of SAMAs that do not relate to license renewal.[34] These statements were wholly correct, and were not refuted in New York's Answer.

Moreover, contrary to New York's unsupported claims, it is not the Staff's position that information related to the costs of SAMA implementation should only be reviewed by the Staff

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[30] *See* Staff Petition at 45, 47-48, and 50-51.

[31] *See* Staff Petition at 54-57.

[32] New York's Answer at 53; emphasis added. Similarly, New York asserts, without citation to either the Staff's or Applicant's Petitions, that "[c]ontrary to the arguments advanced by Entergy and NRC Staff, at no point does the Commission confine the SAMA analysis during license renewal to aging management." *Id.* at 59.

[33] Staff Petition at 43, 48; *see* FSEIS (Ex. NYS000133), § 5.2 and Appendix G.

[34] Staff Petition at 52-54; FSEIS (Ex. NYS000133) at 5-11.

outside the purview of the Board and public; nor did the Staff's Petition state that a SAMA analysis need not consider the cost of implementing SAMAs unless they relate to license renewal.[35] To the contrary, implementation costs should be considered as part of the NEPA cost/benefit SAMA analysis – and such cost information was, in fact, considered in the FSEIS for Indian Point.[36] What is not required for purposes of satisfying NEPA is what the Board required here – final engineering project costs for SAMA implementation, where reasonable estimates of such implementation costs were already provided and evaluated by the Staff.

Finally, New York incorrectly suggests that the Staff considers it unnecessary to conduct "a meaningful SAMA analysis for [Indian Point],"[37] or to explain its rationale for not requiring SAMA implementation "without scrutiny by an independent ASLB and without active participation by the public and 'host' States."[38] To the contrary, the Staff submits that (1) it presented a meaningful analysis of all identified SAMAs in the FSEIS, and (2) the FSEIS provided a substantial, sufficient and augmented rationale for not requiring implementation of those SAMAs as a condition for license renewal. The Board's failure to address that augmented rationale is at the "crux" of the Staff's petition for review of LBP-11-17.[39]

B. The Board's Decision in LBP-11-17 Is Ripe for Review.

In its Answer, New York asserts that because Entergy has now submitted detailed engineering project cost information as the Board had required, and because the Staff has undertaken to review that information, any review of the Board's decision in LBP-11-17 has now been rendered "unripe."[40] In making this argument, New York essentially asserts that the facts

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[35] New York's Answer at 47, 56, and 61.

[36] *See* Staff Petition at 47-48; FSEIS (Ex. NYS000133) at 5-4 and G-34 – G-40.

[37] New York's Answer at 54.

[38] *Id.* at 55-56; *cf. id.* at 61.

[39] *See* Staff Petition at 52-57; FSEIS (Ex. NYS000133) at 5-11 – 5-12.

[40] New York's Answer at 38 and 45-46.

have now changed, inasmuch as the new cost information and the Staff's review thereof may lead to further litigation of Contention NYS-35/36 and further Board decisions thereon.[41] This argument is without merit: As all parties (including New York) and the Board have explicitly recognized, Contention NYS-35/36 raised solely a legal issue.[42] Thus, Contention NYS-35/36 raised two questions: (1) Whether the Staff is required to consider final engineering project cost information in an FSEIS evaluation of SAMAs, and (2) whether the Staff must require implementation of cost-beneficial SAMAs as a condition for license renewal or whether it had provided a sufficient rationale for not requiring such implementation. The Board's decision in LBP-11-17 is ripe for review at this time, as it is altogether unaffected by Entergy's recent submittal of its engineering project cost information or the Staff's ongoing evaluation thereof.

C. The Staff's Petition for Review of LBP-11-17 Is Timely.

New York contends that the Applicant's and Staff's petitions for review are untimely, in that a "final decision" has not been rendered in this proceeding.[43] These assertions should be rejected. First, as stated in the Staff's Petition, Commission case law establishes that parties may file petitions for review of a Partial Initial Decision that resolves a major segment of the case.[44] The Board's decision in LBP-13-13 does just that. Moreover, the Board's decision in LBP-13-13 resolved all contentions other than four "Track 2" contentions (whose litigation has been deferred to await the Staff's review); and it resolved all other SAMA-related contentions in this proceeding (NYS 12C and NYS-16B). Second, while the Commission stated in CLI-11-14 that an appeal from LBP-11-14 "must await the Board's final decision in this proceeding,"[45] New

[41] *Id.* at 46-47.

[42] LBP-11-17, 74 NRC at 17-20, 24-25, and 27; *see* Staff Petition at 45.

[43] New York's Answer at 38, 41.

[44] *See* Staff Petition at 58-59.

[45] *Entergy Nuclear Operations, Inc*. (Indian Point, Units 2 and 3), CLI-11-14, 74 NRC 801, 803 (2011).

York's reliance on this statement is misplaced, in that the Commission made this statement before the Board had bifurcated the proceeding into two tracks, and before the Board had rendered a PID that resolved all but four of the 15 admitted contentions in this proceeding. Thus, the Commission had no reason to address the question of whether an appeal from LBP-11-17 would be proper upon issuance of a PID that resolved all Track 1, and all SAMA-related, contentions. Finally, as stated in the Staff's Petition, Commission case law establishes that petitions for review of a summary disposition ruling may be filed following issuance of a PID that resolves a major segment of the case, particularly where that decision resolves all other related issues.[46] New York fails to address this well-established case law. Accordingly, New York's arguments that petitions for review of LBP-11-17 are interlocutory at this time should be rejected.

CONCLUSION

The Staff respectfully submits that the Board's decisions in LBP-13-13 (on Contention NYS-8) and LBP-11-17 (on Contention NYS-35/36) were clearly erroneous and warrant Commission review. Further, New York's Answer fails to establish any reason why the Commission should not grant the Staff's petition for review of those decisions at this time.

Respectfully submitted,

Signed in accordance with 10 C.F.R. 2.304(d)

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Dated at Rockville, Maryland
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[46] *See* Staff Petition at 58-59, and cases cited therein.

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CERTIFICATE OF SERVICE

Pursuant to 10 C.F.R § 2.305, I hereby certify that copies of the foregoing "NRC STAFF'S REPLY TO STATE OF NEW YORK'S ANSWER IN OPPOSITION TO STAFF PETITION FOR REVIEW OF LBP-13-13 AND LBP-11-17," dated April 9, 2014, have been served upon the Electronic Information Exchange, the NRC's E-Filing System, in the above captioned proceeding, this 9th day of April, 2014.

/Signed (electronically) by/

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