UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

In the Matter of	)	Docket Nos. 50-247-LR and 50-286-LR
ENTERGY NUCLEAR OPERATIONS, INC.	)	
(Indian Point Nuclear Generating Units 2 and 3)	)	
	)	February 14, 2014

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)

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I. INTRODUCTION

Pursuant to 10 C.F.R. § 2.341(b), Entergy Nuclear Operations, Inc. ("Entergy") hereby petitions the Nuclear Regulatory Commission ("NRC" or "Commission") for review of the Atomic Safety and Licensing Board's ("Board") First Partial Initial Decision ("PID") Concerning Track 1 Contentions (LBP-13-13), issued on November 27, 2013,[1] and other Board decisions that are now ripe for review. As set forth below, the Commission should grant this Petition for Review and reverse certain of the Board's decisions with respect to Contentions NYS-8 (Electrical Transformers), CW-EC-3A (Environmental Justice), and NYS-35/36 (SAMA Cost Estimates) because the Board's decisions are based on conclusions that are contrary to established law and clearly-erroneous findings of material fact.[2] Moreover, Commission review is in the public interest because these decisions raise substantial and important questions of policy and law that affect a broad spectrum of Commission licensing decisions.[3]

Regarding NYS-8, Entergy petitions the Commission for review of the Board's July 31,

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1 *Entergy Nuclear Operations, Inc*. (Indian Point Nuclear Generating Units 2 & 3), LBP-13-13, 77 NRC __, slip op. (Nov. 27, 2013).

2 10 C.F.R. § 2.341(b)(4)(i), (ii).

3 *Id*. § 2.341(b)(4)(iii), (v).

2008 decision (LBP-08-13) originally admitting the contention. As detailed below in Section III, the State of New York ("New York" or "NYS") failed to provide sufficient support for NYS-8, contrary to 10 C.F.R. § 2.309(f)(1)(v). Thus, the Board erred as a matter of law in admitting the contention. This is confirmed by the Commission's decision in *Seabrook* (CLI-12-05),[4] rejecting a materially-indistinguishable contention supported by the same declarant. Entergy also seeks Commission review of the Board's PID finding in favor of NYS on the merits. As to contention NYS-8, the Board erred by concluding that transformers function without a change in configuration, properties, or state; by creating a new definition of "passive" that includes components that cannot be readily-monitored for incremental degradation and to predict future failure; in challenging the current licensing basis ("CLB") for Indian Point Nuclear Generating Units 2 and 3 ("IP2" and "IP3," collectively "Indian Point" or "IPEC"); by failing to adequately compare transformers to the most relevant "active" electrical components identified in 10 C.F.R. § 54.21(a)(1)(i); and by rejecting longstanding persuasive regulatory guidance.

Regarding CW-EC-3A, Entergy petitions the Commission for review of the Board's decisions admitting the original and amended contention (LBP-08-13 and its July 6, 2011 Order). As set forth below in Section IV, contrary to 10 C.F.R. § 50.47(a)(1)(i), the National Environmental Policy Act ("NEPA"), and longstanding Commission precedent, the Board erred in admitting Hudson River Sloop Clearwater's ("Clearwater") contention that fundamentally challenged the effectiveness of emergency plans for Indian Point. Entergy further petitions the Commission for review of the Board's decisions denying Entergy's Motions in Limine and admitting extensive evidence and testimony challenging the effectiveness of the Indian Point emergency plans, contrary to 10 C.F.R. § 2.337(a). Entergy also petitions the Commission for

[4] *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-05, 75 NRC 301 (2012).

review of certain aspects of the Board's PID on CW-EC-3A. The Board augmented the NEPA record through its hearing and, in the PID, ultimately resolved Clearwater's environmental justice ("EJ") contention CW-EC-3A in the NRC Staff's favor. In doing so, however, the Board *de facto* reversed the Staff's original finding in the Final Supplemental Environmental Impact Statement ("FSEIS")[5] that there are no disproportionate adverse impacts on EJ populations associated with the Indian Point license renewal. The decision is based on multiple errors of law and fact that could have a substantial impact upon many licensees and the course of many licensing proceedings. Additionally, the Board's decision raises important questions of policy related to the manner in which the Staff may meet its NEPA-related obligations in future renewal proceedings.

Finally, regarding NYS-35/36, Entergy petitions the Commission for review of the Board's June 30, 2010 decision (LBP-10-13)[6] to originally admit the consolidated contention, and its July 14, 2011 summary disposition ruling (LBP-11-17)[7] in New York's favor (collectively, the "SAMA Orders").[8] As shown in Section V below, the SAMA Orders are ripe for Commission review given their direct nexus to Entergy's severe accident mitigation alternatives ("SAMA") analysis and the Staff's review thereof (as documented in the FSEIS); *i.e.*, it need not await the Board's resolution of pending "Track 2" contentions that raise no issues related to the SAMA analysis. Importantly, the Board's decisions raise substantial legal questions concerning the proper interpretation and application of 10 C.F.R. §§ 50.109(a)(3) and 54.33(c), as well as the Staff's legal authority to compel licensee implementation of individual

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5 NUREG-1437, Supp. 38, *Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Regarding Indian Point Nuclear Generating Unit Nos. 2 and 3, Final Report* (Dec. 2010) ("FSEIS").

6 *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 &3), LBP-10-13, 71 NRC 673 (2010).

7 *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 &3), LBP-11-17, 74 NRC 11 (2011).

8 Entergy is not appealing the Board's decision in LBP-13-13 on two other SAMA-related contentions, NYS-12 and NYS-16. Entergy believes those contentions were correctly decided.

SAMAs unrelated to aging management. The Board's decisions also raise important policy questions insofar as they relate to how the NRC Staff may meet its NEPA-related obligations to review and analyze SAMAs in future license renewal proceedings.

Therefore, Entergy respectfully requests that the Commission reverse the Board's decisions with respect to contentions NYS-8 and NYS-35/36, and uphold the Staff's FSEIS analysis on CW-EC-3A.

II. LEGAL STANDARDS GOVERNING PETTIONS FOR REVIEW

A. Standard of Review

Section 2.341(b)(1) provides for discretionary review of a full initial decision or PID. It provides that the Commission will consider a petition for review if it raises a "substantial question" with respect to the following considerations: (1) a finding of material fact is clearly erroneous or in conflict with a finding as to the same fact in a different proceeding; (2) a necessary legal conclusion is without governing precedent or is a departure from or contrary to established law; (3) a substantial and important question of law, policy or discretion has been raised; (4) the conduct of the proceeding involved a prejudicial procedural error; or (5) any other consideration which the Commission may deem to be in the public interest.[9]

The Commission reviews legal or policy questions *de novo*.[10] The Commission has cited several reasons for granting review of legal and policy questions including: (1) when a case presents "a legal issue that is essential to a broad spectrum of Commission licensing decisions;" (2) when a question of proper interpretation of the Commission's regulations exists; and (3) when "the Presiding Officer's ruling is without governing precedent," *i.e.*, the Commission "has

[9] *See* 10 C.F.R. § 2.341(b)(4).

[10] *AmerGen Energy Co.* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 259 (2009).

not had the opportunity to rule on the precise issue presented."[11] The Commission will "reverse a licensing board's legal rulings if they are 'a departure from, or contrary to, established law.'"[12]

Licensing boards have a duty to carefully review the evidence, including testimony and exhibits, and to resolve any factual disputes.[13] The Commission has the authority to review factual findings *de novo*, but typically defers to a licensing board's findings of fact as long as the "Licensing Board has issued a plausible decision that rests on carefully rendered findings of fact."[14] The Commission, however, may intercede "to correct 'clearly erroneous' findings—that is, findings 'not even plausible in light of the record viewed in its entirety'"[15]—where there "is strong reason to believe that . . . a board has overlooked or misunderstood important evidence."[16] In such instances, the Commission will reject or modify a licensing board's findings if the Commission is "convinced that the record compels a different result."[17]

The Commission has recognized that licensing boards have considerable discretion in making decisions on whether to admit evidence.[18] The Commission reviews such decisions under an abuse of discretion standard.[19] Under that standard, the petitioner must persuade the

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11 *See Hydro Res., Inc.* (P.O Box 777, Crownpoint, N.M. 87313), CLI-06-7, 63 NRC 165, 166 (2006).

12 *See Oyster Creek*, CLI-09-7, 69 NRC at 259 (citation omitted).

13 *See id.* (citing *Private Fuel Storage, LLC* (Indep. Spent Fuel Storage Installation), CLI-05-19, 62 NRC 403, 411 (2005).

14 *S. Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), CLI-10-05, 71 NRC 90, 98-99 (2010) (citation omitted).

15 *La. Energy Servs. L.P.* (National Enrichment Facility), CLI-06-22, 64 NRC 37, 40 (2006) (some internal quotation marks omitted) (citing *Hydro Res., Inc.*, (P.O. Box 777, Crownpoint, N.M. 87313), CLI-06-01, 63 NRC 1, 2 (2006); *Anderson v. Bessemer City*, 470 U.S. 564, 573-76 (1985); *Private Fuel Storage, L.L.C.* (Indep. Spent Fuel Storage Installation), CLI-03-8, 58 NRC 11, 25-26 (2003)).

16 *Oyster Creek*, CLI-09-7, 69 NRC at 259 (citing *Private Fuel Storage*, CLI-05-19, 62 NRC at 411).

17 *Gen. Pub. Utils. Nuclear Corp.* (Three Mile Island Nuclear Station, Unit 2), ALAB-926, 31 NRC 1, 13 (1990).

18 *See Duke Energy Corp.* (Catawba Nuclear Station, Units 1 & 2), CLI-04-21, 60 NRC 21, 27 (2004); *see also Duke Power Co.* (William B. McGuire Nuclear Station, Units 1 & 2), ALAB-669, 15 NRC 453, 475 (1982).

19 *Catawba*, CLI-04-21, 60 NRC at 27.

Commission "that a reasonable mind could reach no other result" in order to prevail.[20]

With regard to admitting contentions, the Commission generally defers to Board decisions, but it will reverse if there is clear "error of law or abuse of discretion."[21]

B. Scope of Review

Following the issuance of a PID, a party "should assert any claims of error that relate to the subject matter of the partial initial decision."[22] This includes issues that were "admitted for hearing or not, [] without regard to whether the issue was originally designated a separate 'contention' or a 'basis' for a contention."[23] In this matter, among those claims that relate to the subject matter of the PID is NYS-35/36, which is substantially related to the other SAMA contentions that were disposed of in LBP-13-13 and was originally part of the "Track 1" contentions before the Board granted summary disposition to NYS.

Under 10 C.F.R. § 2.311(d)(1), an applicant may appeal an order granting a petition to intervene, only if "the request for hearing or petition to intervene should have been wholly denied." If an applicant only seeks to challenge the admission of *some* of the contentions, then it must wait until "later in [the] proceeding, once the Board has issued its Initial Decision."[24] Accordingly, a party may appropriately challenge the admission of a contention following the issuance of a PID related to that contention.

As a general rule, petitions for review are considered unnecessary when a party seeks to

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20 *Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), ALAB-952, 33 NRC 521, 532 (1991), *aff'd*, CLI-91-13, 34 NRC 185 (1991).

21 *See e.g.*, *FirstEnergy Nuclear Operating Co*. (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-08, 75 NRC 393, 398 (2012); *Seabrook*, CLI-12-05, 75 NRC at 307.

22 *Private Fuel Storage*, *L.L.C.* (Indep. Spent Fuel Storage Installation), CLI-00-24, 52 NRC 351, 353 (2000) ("PFS").

23 *Id.*

24 *Pa'ina Haw., LLC* (Material License Application), CLI-06-13, 63 NRC 508, 509 (2006).

appeal a decision that was ultimately decided in the petitioner's favor.[25] There are, however, several exceptions. Where a licensing board's decision could "have an impact upon the course of many licensing hearings," it is appropriate for a party to seek review even if a contention was ultimately decided in its favor.[26] Prevailing parties may also challenge a "legal issue of clear recurring importance, even though (wholly fortuitously) the disposition of this case did not hinge upon it."[27]

III. CONTENTION NYS-8 (ELECTRICAL TRANSFORMERS)

A. Statement of the Case

This proceeding concerns the joint license renewal application ("LRA") for Indian Point, as submitted by Entergy on April 23, 2007 and subsequently amended. The procedural history of this proceeding is provided in detail in LBP-13-13. The following, therefore, focuses only on the most pertinent submissions and rulings.

NYS filed an intervention petition in this proceeding on November 30, 2007, including submission of NYS-8, alleging that the LRA violates 10 C.F.R. §§ 54.21(a) and 54.29 because it does not include an aging management program ("AMP") for each electrical transformer whose function is important for plant safety.[28] Although not referenced in NYS-8, NYS submitted with its intervention petition a declaration of Paul Blanch that included four paragraphs related to

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[25] *See Pub. Serv. Co. of Ind.* (Marble Hill Nuclear Generating Station, Units 1 & 2), ALAB-459, 7 NRC 179, 202 (1978); *Consumer Power Co*. (Midland Plant, Units 1 & 2), ALAB-282, 2 NRC 9, 10 n.1 (1975).

[26] *N. States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 & 2), ALAB-252, 8 AEC 1175, 1177 (1975).

[27] *Id*. at 1178.

[28] *See* New York State Notice of Intention to Participate and Petition to Intervene at 103 (Nov. 30, 2007) ("NYS Petition"), *available at* ADAMS Accession No. ML073400187.

transformers.[29] NYS and Mr. Blanch asserted, without more, that "[t]ransformers function without moving parts or without a change in configuration or properties."[30]

Entergy and the NRC Staff opposed admission of NYS-8 based on lack of adequate support.[31] In particular, NYS did not address or challenge longstanding NRC-approved guidance that transformers are "active" components not subject to aging management review ("AMR") per 10 C.F.R. § 54.21(a)(1)(i).[32]

The Board issued LBP-08-13 on July 31, 2008, with a brief ruling that admitted NYS-8 as follows: "Entergy has not proposed an AMP for each electrical transformer in IP2 and IP3 required for compliance with 10 C.F.R. §§ 50.48 and 50.63. This does not include transformer support structures."[33]

The parties thereafter made their pre-hearing filings,[34] and the Board held the evidentiary hearing on NYS-8 on December 13, 2012. On November 27, 2013, the Board issued the PID. The Board concluded:

> In regard to NYS-8, because we find transformers to be 'passive' components, transformers fall with[in] the scope of 10 C.F.R. Part 54 and must undergo AMR pursuant to 10 C.F.R. § 54.21(a)(1). Therefore, Entergy has not demonstrated that it will

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29 *See* Declaration of Paul Blanch (Nov. 28, 2007) ("Blanch Declaration"), *available at* ADAMS Accession No. ML073400205. The four paragraphs in the Blanch Declaration that address transformers are reproduced in their entirety in Attachment 1 to this petition for review.

30 NYS Petition at 103; Blanch Declaration ¶ 21.

31 Answer of Entergy Nuclear Operations, Inc. Opposing New York State Notice of Intention to Participate and Petition to Intervene at 69-73 (Jan. 22, 2008) ("Entergy Answer"), *available at* ADAMS Accession No. ML080300149; NRC Staff's Response to Petitions for Leave to Intervene Filed by (1) Connecticut Attorney General Richard Blumenthal, (2) Connecticut Residents Opposed to Relicensing of Indian Point, and Nancy Burton, (3) Hudson River Sloop Clearwater, Inc., (4) the State of New York, (5) Riverkeeper, Inc., (6) the Town of Cortlandt, and (7) Westchester County, at 44-46 (Jan. 22, 2008) ("NRC Staff Answer"), *available at* ADAMS Accession No. ML080230543.

32 Entergy Answer at 70.

33 *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 & 3), LBP-08-13, 68 NRC 43, 218 (2008).

34 *See Indian Point*, LBP-13-13, slip op. at 20-22, 198-99. In its pre-hearing filings and at the evidentiary hearing, NYS did not rely upon any testimony from Mr. Blanch. Instead, NYS relied on testimony from Dr. Robert Degeneff. *Id.* at 198.

adequately manage the effects of aging on the relevant components as required by 10 C.F.R. §§ 54.21(a)(3). Accordingly, NYS-8 is resolved in favor of New York.[35]

B. Issues Presented in the Board's Resolution of NYS-8

1. Whether the Board incorrectly concluded in LBP-08-13 that NYS-8 satisfied the Commission's contention admissibility requirements in 10 C.F.R. § 2.309(f)(1), particularly given the Commission's subsequent rejection of a materially-indistinguishable contention in *Seabrook* (CLI-12-05)?

2. Whether the Board's conclusion in LBP-13-13 that transformers are passive components subject to AMR is plausible and adequately supported when reviewed against the evidentiary record in its entirety?

C. The Commission Should Review and Reverse the Board's Rulings in LBP-08-13 and LBP-13-13 Regarding NYS-8

1. The Board Erred In Admitting NYS-8

Commission review of LBP-08-13 is warranted under 10 C.F.R. § 2.341(b)(4)(ii) because the Board's admission of NYS-8 rested on legal conclusions that depart from established law.[36]

a. NYS-8 did not satisfy contention admissibility requirements.

NYS argued that the Indian Point LRA violates 10 C.F.R. §§ 54.21(a) and 54.29 because it does not include an AMP for electrical transformers whose function is important for plant safety.[37] NYS submitted the declaration of Mr. Blanch to support its contention.[38] As purported evidence, both Mr. Blanch and NYS provided a few identical, cursory statements about the importance of transformers to plant safety, but they failed to provide any support for *why* transformers are subject to AMR under 10 C.F.R. Part 54. Instead, they offered only the conclusory statement that "[t]ransformers function without moving parts or without a change in configuration or properties."[39]

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35 *Id.* at 389.

36 *See Oyster Creek*, CLI-09-7, 69 NRC at 259.

37 NYS Petition at 103-05.

38 *See* Blanch Declaration at 5-6.

39 NYS Petition at 103; Blanch Declaration at 5.

Entergy and the NRC Staff opposed admission of NYS-8 for failing to satisfy the contention admissibility requirements in 10 C.F.R. § 2.309(f)(1).[40] Specifically, Entergy established that NEI 95-10 (Industry Guideline for Implementing the Requirements of 10 C.F.R. Part 54 – The License Renewal Rule), which the NRC endorsed in 2001 in Regulatory Guide 1.188, concludes that transformers are active components that are not subject to AMR.[41] Transformers instead are managed by the ongoing maintenance rule program in accordance with 10 C.F.R. § 50.65, which is outside the scope of license renewal.[42] NYS never cited or discussed this guidance in the contention or four paragraphs of the supporting declaration, much less proffered any bases to support a challenge to this longstanding NRC guidance classifying transformers as "active" components.[43] For these reasons, NYS failed to meet the contention admissibility requirements of 10 C.F.R. §§ 2.309(f)(1)(ii), (v), and (vi).

Notwithstanding this deficiency, the Board admitted NYS-8. It adopted the conclusory statement of NYS and Mr. Blanch, ruling that "[t]ransformers (necessary for compliance with 10 C.F.R. §§ 50.48 and 50.63) nominally perform their safety-related function without moving parts and without a change in configuration or properties."[44]

In doing so, the Board failed to hold NYS to its burden under 10 C.F.R. § 2.309(f)(1)(v) to provide adequate support for its proposed contention.[45] The Commission has repeatedly held

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40 Entergy Answer at 69-73; NRC Staff Answer at 44-46.

41 Entergy Answer at 70.

42 *Id.; see also Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 & 4), CLI-01-17, 54 NRC 3, 7-8 (2001) (stating that current licensing basis issues, "which already are the focus of ongoing regulatory processes—do not come within the NRC's safety review at the license renewal stage").

43 Although NYS's reply mentions the Standard Review Plan in response to the Staff's answer, NYS does not challenge its contents. New York State Reply in Support of Petition to Intervene at 58-61 (Feb. 22, 2008).

44 *Indian Point*, LBP-08-13, 68 NRC at 88.

45 *See Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-15, 75 NRC 704, 714 (2012) ("At the threshold contention admission stage, the burden for providing support for a contention is on the petitioner."); *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-10, 75 NRC 479, 488 (2012) (stating that a petitioner's "failure to provide adequate basis and support by itself is sufficient to require

that "an expert opinion that merely states a conclusion . . . without providing *a reasoned basis or explanation* for that conclusion is inadequate because it deprives the Board of the ability to make the necessary, reflective assessment of the opinion."[46] In short, a contention "will be ruled inadmissible if the petitioner . . . [provides] only 'bare assertions and speculation.'"[47] NYS's and Mr. Blanch's statements failed to satisfy these mandatory requirements.

The Board also rejected Entergy's and the Staff's arguments derived from the on-point transformer guidance, concluding that Entergy and the Staff did not provide "any legally binding justification" for excluding transformers from AMR and did not explain "how a transformer changes its configuration or properties in performing its functions."[48] In doing so, the Board inappropriately shifted the burden onto Entergy and the NRC Staff to provide support for rejecting the contention. Longstanding Commission precedent establishes, however, that "the initial burden of showing whether the contention meets our admissibility standards" lies with the petitioner (not the applicant).[49] The petitioner did not shoulder its burden and, consequently, the Board's admissibility determination should be overturned as an error of law.

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rejection of the contention"); *Davis-Besse*, CLI-12-08, 75 NRC at 414 ("At the contention admissibility stage, it is Petitioners' burden to come forward with factual or expert support for their argument . . .").

46 *USEC, Inc.* (Am. Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006) (emphasis added) (quoting *Private Fuel Storage*, (Indep. Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 181 (1998)).

47 *Fansteel*, *Inc.* (Muskogee, Okla., Site), CLI-03-13, 58 NRC 195, 203 (2003) (quoting *GPU Nuclear Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 208 (2000)).

48 *Indian Point*, LBP-08-13, 68 NRC. at 89.

49 *Progress Energy Carolinas, Inc.* (Shearon Harris, Units 2 & 3), CLI-09-08, 69 NRC 317, 325 (2009) (citing *Ariz. Pub. Serv. Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, & 3), CLI-91-12, 34 NRC 149, 155 (1991)); *see also* Policy on Conduct of Adjudicatory Proceedings, 63 Fed. Reg. 41,872, 41,874 (Aug. 5, 1998) ("[T]he burden of coming forward with admissible contentions is on their proponent"). "A contention's proponent, not the licensing board, is responsible for formulating the contention and providing the necessary information to satisfy the basis requirement for the admission of contentions in 10 CFR [2.309(f)(1)]." *Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18, 22 (1998).

b. Rejection of NYS-8 as inadmissible is required by *Seabrook*.

The original *Indian Point* and *Seabrook* transformer contentions are materially indistinguishable.[50] The wording of the contentions is identical (except for the facility names), the contentions' bases and supporting evidence are materially the same, and the contentions relied upon statements from Mr. Blanch that are materially the same. To assist the Commission, Attachment 1 to this Petition for Review tracks the minimal differences between the submissions made to support the identical contentions and illustrates that the two contentions differ in no substantive, material way. Significantly, in admitting the contention, the *Seabrook* board, like the *Indian Point* Board, cited the "non-binding" nature of Staff guidance[51] and relied on Mr. Blanch's declaration in admitting the transformer contention.[52]

On appeal, the Commission reversed the *Seabrook* board's admissibility ruling.[53] It concluded that the petitioners' transformer contention was "too thinly supported" to warrant admission,[54] and that the petitioners did not challenge "longstanding" NRC guidance classifying transformers as "active" components under 10 C.F.R. Part 54.[55] The Commission cited a 1997 letter from Christopher Grimes, former Director of the NRC's License Renewal Project Directorate, to NEI, which explains the basis of the Staff's conclusion that transformers are not

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50 *Compare* NYS Petition at 103-05 *with NextEra Inc.* (Seabrook Station, Unit 1), Friends of the Coast and New England Coalition Petition for Leave to Intervene, Request for Hearing, and Admission of Contentions at 20-22 (Oct. 20, 2010), *available at* ADAMS Accession No. ML102940558; *Compare NextEra Inc.* (Seabrook Station, Unit 1), Blanch Declaration ¶¶ 21-24 *with* Declaration of Paul Blanch ¶¶ 28-31 (Oct. 18, 2010), *available at* ADAMS Accession No. ML102940557.

51 *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), LBP-11-2, 73 NRC 28, 58 (2011), *rev'd in part*, *aff'd in part*, CLI-12-05, 75 NRC at 319.

52 *See id.* at 57-58. Notably, in concluding that the classification of transformers as active or passive components "remains an unresolved issue," the *Seabrook* board expressly cited the *Indian Point* Board's prior decision to admit NYS-8. *Id.* at 58.

53 *Seabrook*, CLI-12-05, 75 NRC at 322.

54 *Id.* at 319.

55 *Id.*

passive components.[56] It also noted that the Grimes Letter is included as Reference 2 in Appendix C to NEI 95-10.[57] The Commission further noted that the NRC's Standard Review Plan for license renewal also reflects the Staff's conclusion that transformers are not passive components.[58]

Moreover, while the Commission in *Seabrook* recognized that guidance documents may be challenged in individual proceedings, it found Mr. Blanch's assertions that transformers are passive components too "conclusory" to support admission.[59] Absent a "supported challenge" to the guidance, there was no genuine dispute for litigation.[60]

The Commission's *Seabrook* ruling and the *Indian Point* Board's decision admitting NYS-8 cannot be reconciled.[61] The *Indian Point* Board relied on the *same* opinion by Mr. Blanch that the Commission subsequently rejected in CLI-12-05 as "conclusory" and "not adequate" to support admission of an essentially identical contention.[62] The Commission should therefore conclude, as it did in *Seabrook*, that proposed NYS-8 lacked the support required by 10 C.F.R. § 2.309(f)(1)(v), and overturn the Board's decision in LBP-08-13 to admit NYS-8 as a clear error of law and an abuse of discretion.

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56 *Id.* (citing Letter from C.I. Grimes, NRR, to D.J. Walters, NEI, "Determination of Aging Management Review for Electrical Components," Attach. at 2 (Sept. 19, 1997) ("Grimes Letter") (ENT000097)).

57 *Id.* at 317 n.98.

58 *Id.* at 320 n.116 (citing NUREG-1800, Rev. 1, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants," at 2.1-24, Table 2.1-5, item 104 (Sept. 2005) (excluding transformers from the list of structures and components subject to AMR)).

59 *Id.* at 320.

60 *Id.*

61 *See Indian Point*, LBP-08-13, 68 NRC at 86-89.

62 *Seabrook*, CLI-12-05, 75 NRC at 320. The Board's discussion of *Seabrook* in LBP-13-13 is inapplicable to original admissibility.

2. The Board Erred in Concluding that Transformers Are Passive Components Subject to AMR

Commission review of LBP-13-13 is warranted under either or both of two provisions: 10 C.F.R. § 2.341(b)(4)(ii), because the Board's decision (similar to LBP-08-13 discussed above) rests on legal conclusions that depart from well-established law and precedent, and 10 C.F.R. § 2.341(b)(4)(i) because the Board's decision makes a finding of material fact that is clearly erroneous. As demonstrated below, the Commission should reverse LBP-13-13 to remedy these errors.

a. The Board erred in concluding that transformers function without a change in configuration, properties, or state.

Almost 20 years ago, the Commission established a two-part test defining "passive" components as those (1) that perform their intended functions without moving parts or without a change in configuration or properties, *and* (2) for which the aging degradation effects "are not readily monitorable."[63] The Commission specifically noted that it "reviewed several *industry concepts* of 'passive' structures and components and has determined that *they do not* accurately describe the structures and components that should be subject to an [AMR] for license renewal."[64] The Commission emphasized that its description of "passive" structures and components has been "incorporated into § 54.21(a)" and "should be used *only* in connection with . . . the license renewal process."[65]

Rather than follow this Commission direction, the Board instead relied upon *industry* concepts—the "engineering community's" view—on passive and active components. The Board stated that Entergy's and the Staff's "position that transformers are 'active' devices due to their

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[63] Nuclear Power Plant License Renewal; Revisions, 60 Fed. Reg. 22,461, 22,477 (May 8, 1995) ("1995 License Renewal SOC") (NYS000016).

[64] *Id.* (emphasis added).

[65] *Id.* (emphasis added).

change in state during operations runs counter to the prevailing view of the electrical engineering community."[66] This is contrary to the Commission's directions in the SOC for the license renewal rule, which are entitled to "special weight."[67]

The Board also erred by concluding that voltage, current, and magnetic flux are properties of the electricity flowing through a transformer, and not properties of the transformer itself.[68] Notwithstanding the convincing arguments and substantial evidence Entergy presented, the Board merely asserted that it found NYS's position "more reasonable,"[69] with little further explanation. However, as Entergy's experts explained, transformers perform the intended function of transforming and supplying voltage and current to electrical busses.[70] Specifically, when a transformer is energized, it changes from an idle state to an active state, and the transformer's electrical and magnetic properties change.[71] These changes in properties are integral to transformer operation and can be directly measured or observed.[72] Because transformers perform their intended function through changes in their configuration, properties, or state, and because transformer performance, including degradation, is readily monitored,

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66 *Indian Point*, LBP-13-13, slip op. at 215. The Board also points to a statement by Entergy's witness that NYS relied on the "academic community for support, and the academic community's opinions do not apply in the case of nuclear power." *Indian Point*, LBP-13-13, slip op. at 213. The Board responded that "we find nothing academic" about the experience of NYS's witness. *Id.* at 215. From the context of the testimony quoted by the Board, it is clear that the witness was not addressing the credentials of NYS's witnesses, but rather the Statement of Considerations ("SOC") position discussed above – for purposes of license renewal, the NRC does not define "passive" the same way the term is defined by industry, including by electrical engineering academics. *See* Testimony of Applicant Witnesses Roger Rucker, Steven Dobbs, John Craig, and Thomas McCaffrey Regarding Contention NYS-8 (Electrical Transformers) at 12, 52 (Mar. 28, 2012) ("Entergy Transformers Testimony") (ENTR00091).

67 Language in the SOC addressing a regulation is entitled to "special weight." *See, e.g.*, *Pa'ina Haw., LLC* (Materials License Application), CLI-08-3, 67 NRC 151, 154 (2008) ("As NRC guidance endorsed by the Commission and reached in a rulemaking, following notice and comment, [] rulemaking conclusions are entitled to special weight."); *see also Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-900, 28 NRC 275, 290-91 (1988), *review declined*, CLI-88-11, 28 NRC 603 (1988).

68 *Indian Point*, LBP-13-13, slip op. at 216-17.

69 *Id.* at 216.

70 Entergy Transformers Testimony at A24 (ENTR00091).

71 *Id.*

72 *Id.*

transformers are active components not subject to AMR. Therefore, the Board should be reversed because the Board's conclusion is implausible as the record compels a different result.[73]

b. The Board erred in creating a new definition of "passive" that includes components that cannot be readily monitored for incremental degradation and to predict future failure.

The Board stated that "[t]he Commission has determined that it is possible to generically exclude 'active' components from AMR, because, in part, these components have performance and condition characteristics that are readily monitorable."[74] The Board then stated that "performance monitoring tracks whether an SSC [system, structure, or component] is performing its intended function (*i.e.*, assuring gross failure has not occurred), while condition monitoring is concerned with changes in performance with time (*i.e.*, trends) in order to predict the failure."[75] Based on these premises, the Board found that "the ability to detect *incremental functional degradation* (as opposed to gross failure) is the important criteria for an SSC to be considered 'readily' monitorable."[76] Thus, the Board concluded that SSCs that "cannot be measured for *trending data to predict impending failure*" could not realistically be considered readily monitorable.[77]

In essence, the Board has created a new, additional requirement under which a component can only be considered active for purposes of license renewal if it *already* is being monitored in a manner to detect incremental degradation and successfully predict future failure. For example, the Board considers whether there has been a "clear success rate" in tracking progressive degradation of transformers.[78] While certainly monitoring should do more than

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73 *See Oyster Creek*, CLI-09-7, 69 NRC at 259; *Three Mile Island*, ALAB-926, 31 NRC at 13.

74 *Indian Point*, LBP-13-13, slip op. at 217-18 (citing 1995 License Renewal SOC, 60 Fed. Reg. at 22,476).

75 *Id*. at 218.

76 *Id.* at 219-20 (emphasis added).

77 *Id.* at 220 (emphasis added).

78 *Id.* at 253.

simply detect complete failure, the Board goes much further. This new requirement runs counter to Commission direction, and the Board should be reversed for departing from established law.[79]

First, the 1995 License Renewal SOC does not rely on trending, does not require prediction of future failure, and does not discuss "incremental" functional degradation when discussing the standard for whether a component is active.[80] Instead, the Commission stated that "active functions" include those functions "where the parameter of concern (required function), including any design margins, can be directly measured or observed."[81] As Entergy explained, for transformers, the parameter of concern (required function) can be directly monitored through output voltage and current at the terminals, making transformers active components.[82]

Furthermore, the list of components excluded from AMR in 10 C.F.R. § 54.21(a)(1)(i) contains numerous electrical components, including transistors, power inverters, circuit boards, battery chargers, and power supplies. As in the case of transformers, all of these components: (1) have terminal voltages and currents; (2) these terminal voltages and currents are component properties that change as the components perform their required functions; and (3) the changes in terminal voltages and currents can be "directly measured or observed."[83] In summary, the applicable test for an active component is whether its functionality can be directly monitored, not whether incremental functional degradation can be detected to prevent future failure. The Board

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79 *See Oyster Creek*, CLI-09-7, 69 NRC at 259.

80 *See* 1995 License Renewal SOC, 60 Fed. Reg. at 22,471-472, 22,477-478 (NYS000016).

81 *Id.* at 22,471.

82 The primary voltage and current are readily monitored at the primary terminals. The presence of the magnetic field is readily monitored at the secondary terminals. If a load is connected to the secondary winding, then current will flow, which is readily monitored by instrumentation or the reaction at the load (*e.g.*, a motor starts). If the load is varied, then the terminal voltages and currents will vary, as will the internal magnetic field. Thus, all of these transformer properties are readily monitored at the transformer's terminals. *See* Entergy Transformers Testimony at 37 (A55) (ENTR00091).

83 Entergy Transformers Testimony at 42-44 (A60-61) (ENTR00091); NRC Staff's Testimony of Roy Mathew and Sheila Ray Concerning Contention NYS-8 at 12-13 (A20), 23-24 (A32) (Mar. 22, 2012) ("NRC Staff Testimony") (NRC000031).

erred by creating its new requirement.[84]

c. The Board erred by improperly challenging the Indian Point CLB.

As recognized by the Board itself, the NRC's license renewal process specifically exempts challenges to a plant's operational activities covered by its CLB.[85] The Board's conclusions regarding the insufficiency of ongoing transformer preventive maintenance, conducted pursuant to the CLB, run afoul of these requirements and represent an impermissible challenge to current operations.[86]

With respect to Entergy's current programs and procedures to track transformer performance, and past transformer failures at Indian Point (which were not found to be age-related),[87] the Board states: "And while these programs *are based on the current knowledge of industry practic*e, we find that Entergy's and the NRC Staff's testimony does not demonstrate the effectiveness of these tests and assessments in detecting impending transformer failures."[88] The improper challenge to the CLB is further highlighted by the following testimony from NYS's witness, which the Board cited in LBP-13-13: "the 'problem is not that failures aren't preventable, but that such preventive measures are not requirements under the Part 50

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84 Furthermore, even assuming that the Board is correct in concluding that transformers are only active if a licensee monitors for incremental degradation, the Board reached the wrong conclusion here and erred as a matter of fact. The Board acknowledges testimony by Entergy and the NRC Staff that there is substantial existing monitoring of transformers beyond monitoring of output voltage and current, conducted under ongoing, 10 C.F.R. Part 50 preventive maintenance programs, but still erroneously concluded that an AMP is warranted. *See, e.g.*, *Indian Point*, LBP-13-13, slip op. at 222-25; *id.* at 231 ("Beyond measuring voltage and current at the output terminals, numerous other tests and assessments are available to monitor the performance and condition of a transformer, and have been incorporated into the current preventive maintenance programs developed by Entergy."); *id.* at 232 ("To be sure, detailed corporate programs and plant-specific procedures have been developed for [Indian Point] by Entergy and incorporated into its CLB to track transformer performance."); *id.* at 234 ("[W]e find that Entergy has incorporated the current industry practices to monitor transformer health into its preventive maintenance programs and is using that information to identify degrading trends.").

85 *Indian Point*, LBP-13-13, slip op. at 26.

86 *See, e.g.*, *id.* at 230-35. The Board is bound by NRC regulations and cannot impose additional requirements upon licensees. *Hydro Res., Inc.*, LBP-06-1, 63 NRC 41, 59 (2006), *aff'd*, CLI-06-14, 63 NRC 510 (2006) (finding that a board lacks authority to adopt a "policy" that invalidates a Commission regulation).

87 Entergy Transformers Testimony at 105-06 (A115) (ENTR00091).

88 *Indian Point*, LBP-13-13, slip op. at 232 (emphasis added).

regulations. Mandating an AMP for transformers would force licensees to take such additional steps.'"[89] Forcing such additional steps is particularly troubling given the lack of evidence of age-related failures of Indian Point's transformers that perform license renewal intended functions.[90]

In summary, the Board has imposed a new, additional requirement to determine whether a component is passive; a requirement that challenges the CLB and runs contrary to 10 C.F.R. Part 54. Thus, the Board erred as a matter of law and abused its discretion by departing from established law.

d. The Board erred by not adequately comparing transformers to the most relevant active components identified in 10 C.F.R. § 54.21(a)(1)(i).

In LBP-08-13, the Board acknowledged that transformers are "similar to other items that are excluded from AMR" in 10 C.F.R. § 54.21(a)(1).[91] Nonetheless, the Board required testimony from the parties regarding whether transformers are more similar to the included or excluded component examples.[92]

This exercise resulted in the facially deficient Board conclusion that transformers are more closely aligned with mechanical components that require AMR, such as piping, reactor vessels, and steam generators, than with electrical components that do not require AMR, such as transistors, power supplies, and power inverters.[93] As Entergy's witnesses thoroughly explained, a transformer is more similar to other electrical components in the AMR-excluded list because its

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89 *Id.* at 226-27 (quoting Rebuttal Testimony of Dr. Robert C. Degeneff, D. Eng. Regarding Contention NYS-8 at 34-35 (Aug. 6, 2012) (NYSR00414)).

90 Entergy Transformers Testimony at 105-06 (A115) (ENTR00091).

91 *Indian Point*, LBP-08-13, 68 NRC at 88.

92 *Id.* at 89.

93 *Indian Point*, LBP-13-13, slip op. at 253-56. Furthermore, the Board erred in its consideration of substantial Entergy and Staff evidence about how transformers are more like AMR-excluded electrical components by simply concluding that "Entergy's and the Staff's arguments ultimately collapse under our finding that transformers do not change properties or state during operation." *Id.* at 253.

terminal voltages and currents—like those of a power supply, battery charger, or power inverter—change as the transformer performs its intended function and can be directly measured and monitored.[94]

The Board's findings, however, only focused on a few specific examples of AMR-excluded components, including piping, transistors, and batteries.[95] The Board did not make specific findings on the myriad of additional relevant examples, such as relays, power inverters, circuit boards, battery chargers, and power supplies. Instead, the Board stated that "the difference between transformers and other 'active' components like power supplies, inverters, battery chargers, and circuit boards is 'debatable.'"[96]

Additionally, the Board erred in its comparison of transformers and transistors (perhaps the item in the AMR-excluded list that is most similar to transformers). For example, the change in resistivity in a transistor is directly analogous to the change in the magnetic field inside a transformer, the physical characteristics of both components are independent of the applied power, and the changing parameters in both cases are the internal electromagnetic fields.[97] Transistor operation also can be readily observed at the external terminals.[98] Furthermore, there is no monitoring of transistors for slow degradation. This fact, which is directly contrary to the Board's new requirement for whether a component is active, is omitted from the Board's

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94 Entergy Transformers Testimony at 11 (A24) (ENTR00091).

95 *Indian Point*, LBP-13-13, slip op. at 251-56.

96 *Id.* at 252. Indeed, the Board even concluded that comparing transformers to the components in 10 C.F.R. § 54.21(a)(1)(i) "is not conclusive." *Id*. at 251.

97 Entergy Transformers Testimony at 74-75 (A82), 78 (A86) (ENTR000091); *see also* Official Transcript of Proceedings, Indian Point Nuclear Generating Units 2 & 3 at 4337:4-12 (Dec. 13, 2012) ("Dec. 13, 2012 Tr.") (Dobbs).

98 Entergy Transformers Testimony at 74-75 (A82), 81 (A91) (ENTR00091); Dec. 13, 2012 Tr. at 4337:8-12 (Dobbs), 4431:4-10 (Degeneff).

discussion of transistors.[99] The Board did not fully consider and address Entergy's testimony in its decision and reached an implausible conclusion.

For all of these reasons, the Board erred in its consideration of AMR-included or AMR-excluded components in 10 C.F.R. § 54.21(a)(1)(i), and LBP-13-13 should be reversed.

e. The Board erred by dismissing longstanding regulatory guidance.

In LBP-13-13, the Board rejected over 15 years of NRC guidance and precedent concluding that electrical transformers are active components not subject to AMR.[100] This is contrary to Commission precedent, which refers to regulatory guidance documents as having "special weight."[101]

The Commission recently considered this guidance and its purpose and development in *Seabrook*.[102] Notably, the Commission specifically acknowledged that "[l]ongstanding Staff guidance directly addresses the classification of electrical transformers for the purposes of license renewal, and has found them to be 'active' components."[103] That "longstanding" guidance includes the 1997 Grimes Letter, Table 2.1-5 of NUREG-1800 (License Renewal Standard Review Plan), and NEI 95-10.[104] In dismissing the *Seabrook* intervenors' transformers contention, the Commission noted that the intervenors had "disregard[ed]" this Staff guidance

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99 *See Indian Point*, LBP-13-13, slip op. at 255-56.

100 *Id.* at 205, 214 (rejecting the validity of the Grimes Letter as "an opinion that, at best, has scant documentation justifying its technical conclusions").

101 *See Seabrook*, CLI-12-5, 75 NRC at 314 n.78; *Yankee Atomic Elec. Co.* (Yankee Nuclear Power Station), CLI-05-15, 61 NRC 365, 375 n.26 (2005) ("We recognize, of course, that guidance documents do not have the force and effect of law. Nonetheless, guidance is at least implicitly endorsed by the Commission and therefore is entitled to correspondingly special weight") (citations and internal quotation marks omitted); *Private Fuel Storage, L.L.C.* (Indep. Spent Fuel Storage Installation), CLI-01-22, 54 NRC 255, 264 (2001) ("Where the NRC develops a guidance document to assist in compliance with applicable regulations, it is entitled to special weight"), *petition for review held in abeyance*, *Devia v. NRC*, 492 F.3d 421 (D.C. Cir. 2007).

102 *Seabrook*, CLI-12-05, 75 NRC at 316-18.

103 *Id*. at 319.

104 *See* NEI 95-10, Rev. 6, Industry Guideline for Implementing the Requirements of 10 CFR Part 54 – The License Renewal Rule at B-14 (June 2005) (ENT000098).

and relied only on conclusory statements.[105] Thus, the Commission in *Seabrook* implicitly endorsed the Staff's 1997 guidance concerning transformers.[106]

In LBP-13-13, the Board declined to consider the Commission's decision on transformers in *Seabrook*, stating that it was not a merits determination.[107] Although the procedural posture here differs from *Seabrook*, the underlying legal and regulatory principles discussed by the Commission are the same, and the extensive testimony proffered in this matter confirmed that the longstanding guidance stands on sound technical bases.[108] The Board's conclusion that the Commission has not endorsed the Grimes Letter[109] also is contrary to the Commission's statements in *Seabrook*, discussed above, and to the Commission's treatment of transformers in *every* license renewal to date as active components not subject to AMR, but rather addressed by the maintenance rule. Therefore, the Commission should reverse LBP-13-13 with respect to NYS-8 because it departs from established law.

3. The Public Interest Supports the Commission's Review and Reversal of the Board's Decisions on NYS-8

Commission review of LBP-08-13 and LBP-13-13 also is warranted under 10 C.F.R. §§ 2.341(b)(4)(iii) and (v) because the Board's decisions raise substantial policy questions that are in the public interest to be reviewed.

NRC and industry guidance documents have long classified transformers as active components that are excluded from AMR.[110] The NRC has *never* reached a different conclusion

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105 *Seabrook*, CLI-12-05, 75 NRC at 320.

106 *See*, *e.g.*, *Shoreham*, ALAB-900, 28 NRC at 290 (holding that guidance documents are "at least implicitly endorsed by the Commission [and] entitled to correspondingly special weight").

107 *Indian Point*, LBP-13-13, slip op. at 204-05.

108 While rejecting the Commission's statements in *Seabrook* on electrical transformers because of the different procedural posture, the Board cited *Seabrook* repeatedly in other parts of LBP-13-13 on other topics. *See Indian Point*, LBP-13-13, slip op. at 29-30, 33-34, 265, 292, 310.

109 *See id*. at 205.

110 *See supra* Section III.C.2.e.

in approving license renewal applications for 73 reactor units to date.[111] In fact, the NRC has *never* concluded that a Part 54 AMP is necessary to replace or supplement CLB programs and practices as they relate to transformers. Instead, transformer performance is addressed and inspected pursuant to 10 C.F.R. Part 50, including reliance on the maintenance rule.[112]

The Board's decisions have potentially wide-reaching consequences because they involve a fundamentally generic issue, not one that is specific to Indian Point license renewal or Indian Point transformers.[113] The Board's decisions call into question the treatment of electrical transformers for all reactor license renewals, generating considerable confusion for past, present, and future renewals. The decisions also blur the dichotomy between 10 C.F.R. Parts 50 and 54, and would require review of the effectiveness of longstanding Part 50 programs (*e.g.*, maintenance rule program) to determine if AMPs are needed for certain SSCs. This is precisely what the Commission sought to avoid in adopting 10 C.F.R. Part 54, in which it determined that to ensure safe operation during the period of extended operation ("PEO") it should rely upon existing licensee programs and the regulatory process with only a few exceptions.[114]

In summary, the Board's decisions regarding electrical transformers raise important and substantial policy questions that are in the public interest to be reviewed. The Commission should review these decisions and reverse them for the reasons discussed above.

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111 *See* Entergy Transformers Testimony at 10-14 (A24), 86-87 (A96) (ENTR00091).

112 Entergy Transformers Testimony at 86-87 (A96) (ENTR00091).

113 *See, e.g.*, *Entergy Nuclear Vt. Yankee, LLC* (Vt. Yankee Nuclear Power Station), CLI-10-17, 72 NRC 1, 13 (2010) (taking review because a petition raised issues that could affect other license renewal proceedings).

114 1995 License Renewal SOC, 60 Fed. Reg. at 22,464 (NYS000016) ("The first principle of license renewal was that, with the exception of age-related degradation unique to license renewal and possibly a few other issues related to safety only during the period of extended operation of nuclear power plants, the regulatory process is adequate to ensure that the licensing bases of all currently operating plants provides and maintains an acceptable level of safety so that operation will not be inimical to public health and safety or common defense and security.").

IV. CONTENTION CW-EC-3A (ENVIRONMENTAL JUSTICE)

A. Statement of the Case

1. The Board's Admission of Clearwater's Original Contention CW-EC-3

Entergy's LRA includes an environmental report ("ER") that identifies EJ populations within 50 miles of Indian Point, as well as any "new and significant" information regarding environmental impacts addressed in the Generic Environmental Impact Statement ("GEIS"). Entergy determined that there would be no disproportionally high and adverse impacts on members of minority and low-income populations from the proposed action.[115]

As originally proposed, CW-EC-3 raised two overarching concerns.[116] First, Clearwater claimed that Entergy incorrectly used census Block Group data, rather than census Block data, to identify minority and low income populations.[117] Second, Clearwater made multiple assertions,[118] including, as relevant to this appeal, the claim that Entergy failed to account for purported disproportionate impacts because minority and low-income populations will be more severely and negatively impacted by an evacuation resulting from a radiological event at Indian Point.[119]

Clearwater attributed those disproportionate impacts to purported deficiencies in state and local emergency plans for Indian Point. In particular, Clearwater cited alleged significant

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[115] Indian Point Energy Center License Renewal Application, App, E, Applicant's Environmental Report, Operating License Renewal Stage, Indian Point Energy Center §§ 2.6.2, 4.22 ("ER") (ENT00015B).

[116] Hudson River Sloop Clearwater, Inc's Petition to Intervene and Request for Hearing (Dec. 10, 2007) ("Clearwater Petition"), *available at* ADAMS Accession No. ML073520042.

[117] *See id*. at 36-37.

[118] *Id.* at 41-55. Clearwater also argued that Entergy failed to account for purported disproportionate impacts including: 1) cancer rates for minority communities surrounding Indian Point exceed the national average; 2) minority and low-income populations that engage in subsistence fishing in the region ingest radionuclides and other toxic substances from Indian Point at a greater rate, and thus suffer greater harm, than the population at large; and 3) the production, use, and storage of Indian Point nuclear fuel would disproportionately impact Native American populations. *See id.*

[119] *Id.* at 47-48.

difficulties in evacuating low-income and minority populations that rely on public transportation,[120] the alleged lack of evacuation plans for Sing Sing Correctional Facility prisoners,[121] and "extremely problematic" evacuations of disabled individuals due to the lack of "sufficient emergency planning."[122] As further support, Clearwater referenced various reports on emergency preparedness,[123] hurricane Katrina,[124] and also New York State proposed Contention 29 which alleged that Entergy's ER failed to address emergency preparedness and evacuation planning for Indian Point.[125]

Entergy opposed the admission of CW-EC-3, arguing—as relevant here—that emergency planning and the environmental impacts of severe accidents are outside the scope of this license renewal proceeding.[126] Entergy also argued that Clearwater failed to provide evidence of any significant and disproportionate adverse impact, noting that allegations of radioactivity releases below regulatory limits are insufficient to demonstrate a significant adverse impact that would support admission of an EJ contention.[127] The Staff opposed the contention's admission for similar reasons.[128] The Board admitted CW-EC-3 only with respect to Clearwater's claim that

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120 *See id.* at 47-48.

121 *See id.* at 48-53

122 *See id.* at 51-52

123 James Lee Witt Associates, LLC, Review of Emergency Preparedness of Area Adjacent to Indian Point and Millstone at 4.5.2.1 at 71 (2003) (ENT000263).

124 American Civil Liberties Union's National Prison Project, "Abandoned & Abused Orleans Parish Prisoners in the Wake of Hurricane Katrina" (Aug. 9, 2006), *available at* http://www.aclui.org/prison/conditions/2641.4pub20060809.html.

125 *See id*. at 47-48 . The Board ultimately rejected NYS-29 for being outside the scope the proceeding. *See Indian Point*, LBP-08-13, 68 NRC at 149 (finding that Commission regulations and precedent place "consideration of emergency plans outside the scope of this proceeding").

126 Answer of Entergy Nuclear Operations, Inc. Opposing Hudson River Sloop Clearwater Inc's Petition to Intervene and Request for Hearing at 61 (Jan. 22, 2008), *available at* ADAMS Accession No. ML080300053.

127 *Id.* at 66-67 (Clearwater merely assumed a significant adverse impact absent any foundation in law or fact, thus failing to establish a genuine dispute on a material issue). Further, Entergy argued that Clearwater had inappropriately included, in its expansive definition of EJ populations, various segments of the general population, such as children, students, hospital patients, the disabled, and the elderly. *Id.* at 64.

128 NRC Staff Answer at 98-99.

Entergy's EJ evaluation failed to address potential disparate severe accident impacts on minority and low-income populations.[129]

2. The Board Decision Admitting Clearwater Amended Contention CW-EC-3A (July 6, 2011 Order)

Similar to the ER, the Staff's FSEIS identifies minority and low-income populations within a 50-mile radius of Indian Point, and concludes that license renewal would not disproportionately and adversely impact such populations.[130] Thereafter, Clearwater submitted amended Contention CW-EC-3A, requesting that CW-EC-3 also apply to the FSEIS analysis of EJ populations.[131] Entergy and the NRC Staff opposed Clearwater's proposed amendments to CW-EC-3, again on the grounds that they raised issues beyond the limited scope of license renewal and otherwise failed to meet the Commission's admissibility requirements.[132]

The Board admitted CW-EC-3A, in part, expanding it to challenge whether the FSEIS adequately assessed whether EJ populations would suffer disproportionate impacts in the event of a severe accident.[133]

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130 NUREG-1437, Supp. 38, Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Regarding Indian Point Nuclear Generating Units Nos. 2 and 3, Final Report at 4-53 (Dec. 2010) ("FSEIS") (NYS00133B).

131 Motion for Leave to Amend and Extend Contention EC-3 Regarding Environmental Justice and Petition to Do So (Feb. 3, 2011), *available at* ADAMS Accession No. ML110410369. Clearwater also sought to expand the contention's scope to challenge the adequacy of the FSEIS' assessments of the no-action alternative and the impact of adding closed cycle cooling on local EJ populations. *Id*. at 16.

132 Applicant's Answer to Hudson River Sloop Clearwater, Inc.'s Amended Environmental Justice Contention at 2-3, 10 (Mar. 7, 2011), *available at* ADAMS Accession No. ML110770579; NRC Staff's Answer to Amended and New Contention (EC-3) Filed by Hudson River Sloop Clearwater, Inc. Concerning the Final Supplemental Environmental Impact Statement at 2, 8-18 (Mar. 7, 2011), *available at* ADAMS Accession No. ML110670293.

133 Licensing Board Memorandum and Order (Ruling on Pending Motions for Leave to File New and Amended Contentions) at 56, 59-60 (July 6, 2011) (finding that other than those portions of the contention updated to refer to the FSEIS rather than the ER, the rest was inadmissible).

3. The Board's Decision on Entergy's First Motion in Limine (March 6, 2012 Order)

On December 22, 2011, Clearwater submitted its Statement of Position, written direct testimony, and supporting exhibits.[134] Contrary to the Board's unambiguous ruling that "consideration of emergency plans [is] outside the scope of this proceeding,"[135] Clearwater's testimony was fundamentally and inappropriately founded on purported emergency planning deficiencies.[136] In particular, Clearwater's witnesses offered testimony: (1) challenging evacuation plans for Sing Sing prisoners (and for prisons generally);[137] (2) challenging sheltering-in-place as an appropriate protective action recommendation;[138] (3) summarizing interviews Clearwater conducted at various facilities regarding emergency preparedness;[139] (4) asserting local hospitals are unprepared for an accident at Indian Point;[140] (5) asserting difficulties evacuating EJ populations that do not have access to automobiles;[141] (6) asserting difficulties evacuating assisted living facilities;[142] and (7) alleging that Spanish translations of

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134 Initial Statement of Position for Clearwater's Contention EC-3A Regarding Environmental Justice (Dec. 22, 2011) ("Clearwater Position Statement") (CLE000002). *See* Clearwater Exhs. CLE000003 through CLE000010.

135 *Indian Point*, LBP-08-13, 68 NRC at 149.

136 *See, e.g.*, Clearwater Position Statement at 21 (CLE000002) (arguing that "the NRC Staff has repeatedly made the *erroneous legal argument* that emergency planning issues for environmental justice populations are outside the scope of this proceeding and NEPA.").

137 Testimony of Dr. Michael Edelstein in Support of Hudson River Sloop Clearwater, Inc.'s Contention Regarding Environmental Justice at 3-4 (Dec. 22, 2011) ("Edelstein Direct Testimony") (CLE000003); Initial Prefiled Testimony of Anthony Papa in Support of Hudson River Sloop Clearwater, Inc.'s Contention Regarding Environmental Justice (EC-3A) at 3 (Dec. 22, 2011) ("Papa Direct Testimony") (CLE000004).

138 Edelstein Direct Testimony at 3-4 (CLE000003) (stating that radiation-related impacts would be significantly greater in prisons); Papa Direct Testimony at 4 (CLE000004).

139 Initial Prefiled Written Testimony of Manna Jo Greene Regarding Clearwater's Environmental Justice Contention EC-3A at 3 (Dec. 22, 2011) (CLE000010).

140 Initial Prefiled Written Testimony of Erik A. Larsen, MD, FACEP Regarding Clearwater's Environmental Justice Contention EC-3A at 2-3 (Dec. 22, 2011) (CLE000005).

141 Initial Prefiled Written Testimony of Aaron Mair Regarding Clearwater's Environmental Justice Contention at 7-11 (Dec. 22, 2011) (CLE000007); Initial Prefiled Written Testimony of Stephen Filler Regarding Clearwater's Environmental Justice Contention EC-3A at 2-3 (Dec. 22, 2011) (CLE000009).

142 Testimony of John Simms in Support of Hudson River Sloop Clearwater, Inc.'s Contention Regarding Environmental Justice at 2 (Dec. 22, 2011) (CLE000006).

emergency planning information are not properly distributed.[143] Clearwater further requested consideration of "feasible mitigation measures" to address these purported deficiencies, including numerous emergency planning improvements, as well as IP2 and IP3 plant hardware changes to lessen the impact of severe accidents.[144]

Entergy filed a Motion in Limine to exclude direct testimony and exhibits that constituted direct challenges to the effectiveness of existing emergency plans.[145] The NRC Staff supported Entergy's motion.[146] The Board denied Entergy's First Motion in Limine, noting that at hearing it would be "capable of distinguishing between disparaging comments against Indian Point's emergency plans and Clearwater's witnesses' descriptions of how certain EJ populations will be adversely harmed by a severe accident compared to the general population."[147]

4. The Board's Denial of Entergy's Second Motion in Limine (October 15, 2012)

In June 2012, Clearwater filed rebuttal testimony, which also raised broad emergency planning challenges.[148] Entergy and the NRC Staff each filed Motions in Limine seeking again to exclude the portions of Clearwater's testimony and exhibits challenging emergency

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143 Initial Prefiled Written Testimony of Dolores Guardado Regarding Clearwater's Environmental Justice Contention EC-3A at 4-5 (Dec. 22, 2011) (CLE000008).

144 *See* Clearwater Position Statement at 31-32 (CLE000002).

145 *See* Entergy's Motion in Limine to Exclude Portions of Pre-filed Testimony and Exhibits for Contention CW-EC-3A (Environmental Justice) at 7-24 (Jan. 30, 2012), *available at* ADAMS Accession No. ML12030A200. Entergy also sought to exclude testimony on impacts to non-EJ populations and testimony by Clearwater witnesses who lacked necessary expertise or personal knowledge.

146 NRC Staff's Response in Support of Entergy's Motion in Limine to Exclude Portions of Pre-Filed Testimony and Exhibits for Contention CW-EC-3A (Environmental Justice) (Feb. 9, 2012), *available at* ADAMS Accession No. ML12040A313; Clearwater's Reply in Opposition to Entergy's Motion in Limine (Feb. 17, 2012), available at ADAMS Accession No. ML12048B478.

147 Licensing Board Order (Granting in Part and Denying in Part Applicant's Motions in Limine) at 35 (Mar. 6, 2012) (unpublished). Recognizing the Board's Order, but without waiving its arguments that testimony addressing the adequacy of emergency planning is outside the scope of this proceeding, Entergy offered testimony describing the Indian Point emergency plans.

148 *See, e.g.*, Rebuttal Testimony of Michael Edelstein Regarding Clearwater's Environmental Justice Contention EC-3A at 2 (A5) (June 28, 2012) (CLE000047); Rebuttal Testimony of Dr. Andrew S. Kanter , M.D. M.P.H. in Support of Hudson River Sloop Clearwater, Inc.'s Contention EC-3A Regarding Clearwater's Environmental Justice at 2-9 (A4-11) (June 28, 2012) (CLE000048); *see also* Clearwater Exhs. CLE000045 though CLE000059.

planning.[149] On the first day of evidentiary hearings, the Board denied Entergy's second Motion in Limine on CW-EC-3A.[150] It provided no basis for its denial.[151]

5. The Board's Partial Initial Decision on CW-EC-3A (LBP-13-13)

In LBP-13-13, the Board found that the FSEIS analysis of EJ was flawed, because the Staff did not take the requisite "hard look" at the environmental impacts of license renewal on the EJ population.[152] Specifically, the Board found that the Staff failed to: (1) determine whether the EJ population would suffer disproportionate and adverse effects during the PEO in comparison to the general population; and (2) determine whether members of the low-income population who cannot afford to, or do not have the freedom to, self-evacuate or effectively shelter-in-place due to substandard housing would be disparately and adversely impacted in comparison to those who have the freedom, financial means, and readily-available modes of transportation to self-evacuate or access adequate shelter.[153]

The Board also found no legal basis for the Staff's conclusion that there would be no disproportionate and significant adverse impact on minority and low-income populations due to a severe accident, despite the Staff's reliance on the GEIS conclusion that the probability-weighted

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[149] Entergy's Motion In Limine to Exclude Portions of Clearwater's Rebuttal Filings On Contention CW-EC-3A (Environmental Justice) (July 30, 2012), *available at* ADAMS Accession No. ML12212A345; NRC Staff's Motion in Limine to Exclude Portions of Pre-Filed Rebuttal Testimony and Rebuttal Exhibits Regarding Contention CW-EC-3A (Environmental Justice) (July 30, 2012), *available at* ADAMS Accession No. ML12212A419. Entergy also sought to exclude testimony concerning numerous non-EJ populations and irrelevant new claims concerning environmental impacts from terrorist attacks.

[150] Official Transcript of Proceedings, Indian Point Nuclear Generating Units 2 & 3 at 1265:13-22 (Oct. 15, 2012) (Judge McDade).

[151] *Id*. at 1265:14-17 (Judge McDade) ("We have had seven motions in limine that we have not yet ruled on, and let me say up front with regard to those seven, the first seven, we are denying the motions in limine.").

[152] LBP-13-13 at 384, 385.

[153] *Id*. at 383-84. The Board, however, found that the NRC Staff used a reasonable method for identifying minority and low-income populations within the 50-mile radius around Indian Point. *Id*. at 382.

consequences of a severe accident are SMALL for all plants.[154] Accordingly, the Board found that the FSEIS fails to meet the NEPA reasonableness standard.[155]

The Board further found that Clearwater's witnesses had presented testimony that "sufficiently illustrated the potentially disproportionate and adverse impacts on the EJ population surrounding Indian Point in the event of a severe accident."[156] Significantly, while the Board acknowledged that "the risk to both the EJ and non-EJ populations [from a severe accident] is small," it nonetheless concluded, based on testimony from Clearwater witnesses, that there is a higher risk of adverse consequences to the EJ population that warranted discussion in the FSEIS, should an accident occur.[157]

In the end, the Board concluded that because the record of the proceeding included this evidence and would therefore adequately ensure informed decision-making, the Commission, without additional Staff action to revise or supplement the FSEIS, could make an informed decision on whether to grant the requested renewed license.[158] The Board therefore ruled that, despite the foregoing perceived deficiencies in the FSEIS, the agency had met its obligations under NEPA, and resolved the contention in the Staff's favor.[159]

B. Issues Presented in the Board's Resolution of CW-EC-3A

1. Whether it was legal error for the Board to admit CW-EC-3 and CW-EC-3A, as amended, given that (a) Clearwater failed to point to *any* adverse environmental impacts that would result from license renewal (let alone *significant* adverse impacts that would disproportionately affect EJ populations); and (b) both the

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154 *Id*. at 386. According to the Board, "to accept this position would run counter to the NRC requirement that …licensees…devote resources to protecting the public from the consequences of a severe accident." *Id.*

155 *See id*.

156 *Id*. at 387.

157 *Id*.

158 *Id*. at 388.

159 *Id*. at 387. Entergy does not dispute the Board's authority to augment the NEPA record to include the adjudicatory record. *See*, *e.g*., *Nuclear Innovation N. Am. LLC* (South Texas Project, Units 3 & 4), CLI-11-6, 74 NRC 203, 208-09 (2011). Instead, Entergy challenges the sources and subject matters the Board used to augment the record.

original and amended contention are directly founded on purported deficiencies in Indian Point emergency plans and emergency planning guidance generally?

2. Whether it was legal and prejudicial error for the Board to permit Clearwater to present extensive evidence regarding purported deficiencies in the Indian Point emergency plans and emergency planning guidance generally, which are outside the scope of license renewal and the required NEPA analysis?

3. Whether the Board committed legal and factual error in concluding that the Staff's EJ analysis in the FSEIS was inadequate, based on the Board's finding that there could be disproportionate and adverse impacts on EJ populations in the event of a severe accident, given (a) the Staff's reasonable use of the agency's generic finding of "SMALL" probability-weighted consequences of a severe accident; and (b) the lack of record evidence to support the Board's finding?

C. The Commission Should Review and Reverse Several Board Rulings and Findings Regarding CW-EC-3

Petitions for review are generally considered unnecessary when a party seeks to appeal a decision that was ultimately resolved in the petitioner's favor.[160] But the Commission will nevertheless take review where a licensing board's holding could "have an impact on the course of many licensing hearings" and involves a "legal issue of recurring importance."[161] As discussed below, such circumstances are present here.

1. Legal Standards Applicable to Environmental Reviews of License Renewal Applications Under NEPA

Under NEPA and 10 C.F.R. Part 51, the "major federal action" here is license renewal for IP2 and IP3, and the scope of all license renewal proceedings is defined and purposefully limited, pursuant to 10 C.F.R. Part 54.[162] The scope of the Staff's NEPA review is similarly limited and defined by the "major federal action"—*i.e.*, the renewal of the IP2 and IP3 operating

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[160] *See Marble Hill*, ALAB-459, 7 NRC 179, 202 (1978); *Midland*, ALAB-282, 2 NRC 9, 10 n.1.

[161] *Prairie Island*, ALAB-252, 8 AEC at 1177-78.

[162] *See* Final Rule, Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. 28,467, 28,485 (June 5, 1996) (NYS000127).

licenses.[163] The major federal action is defined by Part 54 and does not include review of the CLB, including emergency plans.[164]

Two NEPA principles must guide the Commission in its consideration of this petition. First, NEPA requires agencies to take a "hard look" at the environmental impacts of a proposed action and reasonable alternatives to that action.[165] Second, this "hard look" is "tempered by a practical rule of reason."[166] Consequently, "[w]ith respect to environmental consequences that are only remote possibilities, an agency must be given some latitude to decide what sorts of risks it will assess."[167] Thus, "[a]n EIS [environmental impact statement] need not discuss *remote and highly speculative* consequences."[168] The rule of reason also applies to the level of detail required in an EIS's analysis of those impacts it does analyze.[169]

2. Legal Standards Applicable to Environmental Justice Analyses

"Environmental justice" refers to the federal policy established in 1994 by Executive Order 12898.[170] In accordance with Executive Order 12898, "the NRC has obligated itself to address only the disproportionate distribution of '*high and adverse*' effects in its NEPA

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163 *See La. Energy Servs.L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 87-88 (1998); 42 U.S.C. § 4332(2)(C) (2006).

164 10 C.F.R. §§ 50.47(a)(1(i), 54.30(a).

165 *See Claiborne*, CLI-98-3, 47 NRC at 87-88; *see also v. Methow Valley Citizens Council*, 490 U.S. 332*,* 349 (1989) (holding that NEPA requires agencies to take a "hard look" at environmental consequences prior to taking major actions).

166 *Entergy Nuclear Generation Co*. (Pilgrim Nuclear Power Station), CLI-10-22, 72 NRC 202, 208 (2010) (citing *Cmtys., Inc. v. Busey*, 956 F.2d 619, 626 (6th Cir. 1992); *see also Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 316 (2010); *Hells Canyon Alliance v. U.S. Forest Serv*., 227 F.3d 1170, 1184-85 (9th Cir. 2000)); *U.S. Dep't of Transp. v. Pub. Citizen*, 541 U.S. 752, 767-69 (2004) (stating that the rule of reason is inherent in NEPA and its implementing regulations).

167 *City of New York v. U.S. Dep't of Transp*., 715 F.2d 732, 750 (2nd Cir. 1983).

168 *Trout Unlimited v. Morton*, 509 F.2d 1276, 1283 (9th Cir. 1974) (emphasis added).

169 *Utahns for Better Transp. v. U.S. Dep't of Transp*., 305 F.3d 1152, 1176 (10th Cir. 2002). A "[d]etailed analysis is required only where impacts are likely." *Id.*

170 Executive Order 12898 of February 11, 1994, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 59 Fed. Reg. 7629, 7632 (Feb. 16, 1994) (ENT000259). In 2004, the NRC issued its own "Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions." 69 Fed. Reg. 52,040, 52,041, 52,046 (Aug. 24, 2004) ("NRC Environmental Justice Policy Statement") (ENT000260).

analysis."[171] To that end, "[t]he focus of any 'EJ' review should be on identifying and weighing disproportionately *significant and adverse* environmental impacts on minority and low-income populations that may be *different from the impacts on the general population*."[172] Thus, if no significant and adverse impacts are identified that differ from those on the greater population, then an analysis of disparate impacts is not required.[173]

Thus, there are two prerequisites to support an admissible contention alleging deficiencies in an EJ analysis. First, support must be presented for the alleged existence of significant and disproportionate adverse impacts or harm on the physical or human environment.[174] The mere identification of the presence of an EJ population is insufficient, as are unsupported claims of disparate and adverse impacts.[175] Second, support must be proffered for the claim that the purported adverse impacts could disproportionately affect poor or minority communities in the vicinity of the facility at issue.[176] Accordingly, small impacts that occur equally across all populations cannot form the basis for an admissible contention.[177]

3. The Board Erred in Admitting CW-EC-3

a. Clearwater's contention is fundamentally a challenge to the adequacy of the Indian Point emergency plans.

The Board did not admit CW-EC-3 as a challenge to the adequacy of Entergy's

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171 *S. Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 266 (2007) (citing *Private Fuel Storage, L.L.C.* (Indep. Spent Fuel Storage Installation), CLI-02-20, 56 NRC 147, 154 (2002)) (emphasis added).

172 NRC Environmental Justice Policy Statement, 69 Fed. Reg. at 52,047 (emphasis added) (internal quotations omitted) (ENT000260).

173 *Id.*

174 *Vogtle ESP*, LBP-07-3, 65 NRC at 262 (citing 69 Fed. Reg. at 52,047).

175 *See Dominion Nuclear N. Anna, LLC* (Early Site Permit for N. Anna ESP Site), CLI-07-27, 66 NRC 215, 247 (2007) (describing EJ issues as those "that could lead to a disproportionately high and adverse impact").

176 *Vogtle ESP*, LBP-07-3, 65 NRC at 262.

177 *See N. Anna ESP*, CLI-07-27, 66 NRC at 247 (resting its decision in part on the fact that the "Staff found a majority of the general environmental impacts set forth in this FEIS to be 'small' or, in a very few cases, ''moderate.'").

emergency plan, but rather, as a challenge to Entergy's ER for failing to "properly consider, and publicly disclose, environmental factors that may cause harm to minority and low-income populations that would be 'disproportionate to that suffered by the general population.'"[178] But as described above, the only "environmental factors" alleged in CW-EC-3 were unsupported, alleged deficiencies in the evacuation plans for certain populations. Accordingly, it was clear error for the Board to interpret CW-EC-3 as anything other than a challenge to the effectiveness of the Indian Point offsite emergency plans.

b. Emergency planning issues—whether labeled as safety or environmental issues—are outside the scope of license renewal.

The Board also relied on the rationale that CW-EC-3 was an environmental contention brought under NEPA and not a safety contention brought under Part 54.[179] But there simply is no regulatory or legal basis to assert that emergency planning issues can be raised in a license renewal proceeding via NEPA. Since the license renewal rule was first promulgated, the Commission has consistently stated that emergency planning issues are outside the scope of consideration.[180] As the Board itself recognized in rejecting other contentions challenging the effectiveness of emergency plans, 10 C.F.R. § 50.47(a)(1)(i) "places consideration of emergency plans *outside the scope of this proceeding* and is supported by NRC case law."[181]

Furthermore, exclusion of emergency planning issues from license renewal is entirely consistent with NEPA. When considering environmental consequences that are only remote possibilities, the NRC Staff has latitude in determining which risks to assess.[182] Statute and regulation require Indian Point's emergency plans to provide adequate protection for all

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178 *Indian Point*, LBP-08-13, 68 NRC at 201 (citation omitted).

179 *Id.*

180 *See* Final Rule, Nuclear Power Plant License Renewal, 56 Fed. Reg. 64,943 64,966 (Dec. 31, 1991) ("There is no need for a licensing review of emergency planning issues in the context of license renewal").

181 *Id.* at 149 (emphasis added).

182 *New York*, 715 F.2d at 750.

members of the public equally, and the effectiveness of those plans has been demonstrated through continuous regulatory oversight and drills.[183] Based on these facts, the NRC has determined that the risks associated with emergency planning need not be considered during license renewal. Under NEPA's rule of reason, the NRC Staff need not analyze these risks simply because of unsupported assertions that certain populations would somehow be disproportionately and significantly adversely impacted by ineffective sheltering and poorly-executed evacuation plans, as they amount to little more than remote and highly-improbable or highly-speculative consequences.

Accordingly, Clearwater's challenges to the effectiveness of the Indian Point emergency plans—whether they are characterized as safety or environmental challenges—are beyond the scope of this license renewal proceeding and NEPA.

c. Even if emergency planning issues brought under NEPA are not precluded, the Board still erred in admitting the contention.

Even if challenges to emergency plans brought under NEPA are somehow deemed to be within the scope of a license renewal proceeding—or more fundamentally, even if CW-EC-3 is not viewed as raising emergency planning issues at all—the Board nonetheless erred in admitting the contention. Clearwater failed to show at the contention admissibility stage that *any* "likely" or "probable" adverse environmental impacts would be visited upon EJ populations as a result of license renewal—much less significant or high impacts that would disproportionately affect EJ populations.[184]

In particular, Clearwater provided no evidence showing that license renewal would result

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[183] *See* further discussion at Section IV.D.4.c below.

[184] *Utahns for Better Transp.*, 305 F.3d at 1176; *Trout*, 509 F.2d at 1283. *See also Vogtle ESP*, LBP-07-3, 65 NRC at 263-64 (denying the admission of a similar EJ contention, on the basis that the contention "lacks an adequate showing of adverse impacts, without which disparate impacts have no significance, making the potential issue immaterial to the environmental findings associated with the . . . application and thus an inadmissible contention").

in any radiological doses above regulatory thresholds.[185] Moreover, as discussed below, the Commission has determined generically that the probability-weighted environmental impacts of a severe accident are small (*i.e.*, "not detectable" or "so minor"[186]) for all plants.[187]

4. The Board Erred in Denying Entergy's Motions in Limine Related to CW-EC-3A.

Commission regulations provide that, "[o]nly relevant, material, and reliable evidence which is not unduly repetitious will be admitted."[188] Accordingly, the Board should have excluded or accorded no weight to testimony and exhibits that are outside the scope of, or not relevant to, this license renewal proceeding.[189]

In denying Entergy's First Motion in Limine, the Board stated that it was capable of distinguishing irrelevant testimony critical of Entergy's emergency plan from potentially relevant testimony.[190] In doing so, it essentially acknowledged that attacks on Indian Point's emergency planning were outside the proceeding's scope. But as discussed in Section IV.D.5.b below, despite its assurances and statements, the Board *did* consider evidence critiquing the adequacy of the emergency plans. In fact, at the hearing, the Board actively elicited such testimony.[191]

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185 *Vogtle ESP*, LBP-07-3, 65 NRC at 266. Consistent with the Council on Environmental Quality ("CEQ") guidance, any dose within EPA guidelines would not be "significant (as employed by NEPA), or above generally accepted norms" and therefore, could not result in disproportionately high and adverse human health effects. CEQ Environmental Justice Guidance at 25 (Dec. 10, 1997) (ENT000266).

186 10 C.F.R. Pt. 51, Subpt. A, App. B, Tbl. B-1 § 3 (emphasis added); *see also* Testimony of Entergy Witnesses Donald P. Cleary, Jerry L. Riggs, and Michael J. Slobodien Regarding Contention CW-EC-3A (Environmental Justice) at 44 (A52) (Mar. 29, 2012) ("Entergy EJ Testimony") (ENT000258).

187 *See* further discussion at Section IV.D.4.a below.

188 10 C.F.R. §§ 2.337(a), 2.319(d)-(e).

189 *See, e.g., Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), Licensing Board Order (Ruling on Pending Matters and Addressing Preparation of Exhibits for Hearing) at 2 (Mar. 24, 2008) (unpublished) (granting in part motions to exclude testimony on topics outside the scope of a license renewal proceeding).

190 Licensing Board Order (Granting in Part and Denying in Part Applicant's Motions in Limine) at 35 (Mar. 6, 2012) (unpublished). As noted above, the Board provided no explanation for its oral ruling denying Entergy's Second Motion in Limine on CW-EC-3A.

191 *See, e.g.,* Official Transcript of Proceedings, Indian Point Nuclear Generating Units 2 & 3 at 2832:10-32 (Oct. 23, 2012) ("Oct. 23, 2012, Tr.") (Judge McDade) ("Is there anything about the patterns of automobile ownership or public transportation in Peekskill that would affect the [EJ] population"), *Id.* at 2845:4-7 (Judge

Moreover, Entergy and Staff witnesses—with decades of emergency planning expertise—provided substantial testimony directly contrary to the Clearwater testimony cited by the Board.[192] The Board did not, however, discuss this directly contrary Entergy and Staff witness testimony in the basis for its decision—further indicating that the Board both considered and credited the testimony of Clearwater witnesses (none of whom demonstrated any emergency planning expertise). It was this very error that Entergy's Motions in Limine sought to prevent. Thus, the Board committed clear legal and prejudicial procedural error as well as abused its discretion in denying Entergy's Motions in Limine on CW-EC-3A.

5. **The Board Erred in Concluding in LBP-13-13 that the FSEIS' Environmental Justice Analysis Was Deficient.**

a. The Board erred in concluding that there could be "potential disproportionate and adverse" impacts on environmental justice populations in the event of a severe accident.

As a legal matter, the Board incorrectly determined that the Staff could not rely on the Commission's finding in the GEIS that the probability-weighted consequences of a severe accident are SMALL for all plants.[193] The GEIS finding is codified in 10 C.F.R. Part 51, Table B-1 and carries with it the force of law. The Staff had an absolute duty, as well as a rational basis, to rely on the Commission's finding.

NRC regulations define "SMALL" impacts as environmental impacts that "are *not detectable* or are *so minor* that they will neither destabilize nor noticeably alter any important attribute of the resource."[194] Thus, by definition, SMALL impacts cannot be either high or

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McDade) ("[P]rior to your involvement with this proceeding, were you aware that there were Spanish language sources of information with regard to emergency planning?"), *Id.* at 2847:15-18 (Judge McDade) ("[I]n your direct testimony you talked about some of the circumstances that would be applicable to people in assisted living and in nursing homes in the event of a disaster in the area. Correct?").

[192] Energy and NRC Staff EJ testimony are described further in Section IV.D.5.c below.

[193] *See* LBP-13-13 at 386.

[194] 10 C.F.R. Pt. 51, Subpt. A, App. B, Tbl. B-1 § 3 (emphasis added); *see also* Entergy EJ Testimony at 44 (A52) (ENT000258).

significantly adverse, an important stepping stone in any NEPA-related EJ analysis.

The Commission reaffirmed this GEIS finding in the *Pilgrim* license renewal proceeding stating that the environmental impacts of severe accidents during the license renewal term already have been addressed generically in bounding fashion."[195] In a separate *Pilgrim* decision, the Commission further stated that "no site-specific severe accident impacts analysis need be done" in license renewal proceedings.[196] Accordingly, the Staff acted well within the bounds of NEPA in declining to pursue any further specific analysis on whether EJ populations would suffer disproportionately significant and adverse impacts in the event of a postulated severe accident at Indian Point.

In rejecting this argument, the Board found that the NRC's emergency planning requirements are "a clear indication that the NRC, while cautiously optimistic that a potentially severe accident will not occur at a licensed nuclear reactor, believes it necessary to prepare for just such a possibility."[197]

But under NEPA, an agency may draw reasonable bounds as to which contingencies and effects it chooses to analyze. Contrary to what the Board appeared to assume as matter of logic, the law is clear that simply because an agency may require certain emergency preparedness or planning in anticipation of potential low-probability events does not dictate that those same low probability events must be fully analyzed under NEPA. Thus, the Ninth Circuit has rejected the claim that simply because the Navy acknowledged a risk that a missile might explode, and designed a base to minimize the potential impacts from such an event, that risk must be

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[195] *Pilgrim*, CLI-10-11, 71 NRC at 316; *see also* Entergy EJ Testimony at 44 (A52) (ENT000258); Entergy's Proposed Findings of Fact and Conclusions of Law for Contention CW-EC-3A (Environmental Justice) at 35-36 (¶ 74) (Mar. 22, 2013) ("Entergy Proposed Findings"), *available at* ADAMS Accession No. ML13081A746.

[196] *Pilgrim*, CLI-12-15, 75 NRC at 709; *see also* Entergy Proposed Findings at 36 (¶ 74).

[197] LBP-13-13 at 386.

evaluated under NEPA.[198] Similarly, the Third Circuit has held that the fact that NRC has made certain planning efforts with respect to a potential terrorist attack does not then require detailed NEPA analysis of such attacks in connection with relicensing.[199] Finally, while citing and selectively quoting from the D.C. Circuit's decision in *New York v. NRC*,[200] the Board misses that this case too is consistent with what the Staff did here.

As the court in *New York* noted, "the finding that the probability of a given harm is nonzero does not, by itself, mandate an EIS: after the agency examines the consequences of the harm in proportion to the likelihood of its occurrence, *the overall expected harm could still be insignificant and thus could support a FONSI*."[201] So too here – the NRC Staff has concluded that the overall expected harm for all populations is "SMALL" by considering both the expected harm and the likelihood of occurrence. In turn, it need not undertake further analysis of this small effect within its EIS under NEPA's rule of reason. In sum, the fact that for purposes other than satisfying NEPA the Agency may require facilities to plan for emergencies does not then require the Agency to further analyze such eventualities as part of its NEPA EJ analysis. The Board erred as a matter of law in concluding otherwise.

b. The Board failed to explain the basis for its conclusion that there would be disproportionate and adverse impacts to environmental justice populations in the event of a severe accident at Indian Point.

Licensing boards "are obliged to explain their rulings"[202] and "articulate in reasonable

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198 *Ground Zero Center for Non-Violent Action v. U.S.*, 383 F.3d 1086, 1090-91 (9th Cir. 2004).

199 *N.J. Dep't. of Envtl. Prot. v. NRC*, 561 F.3d 132, 143 (3d Cir. 2009).

200 *See* LBP-13-13 at 385 (citing *N.Y. v. NRC*, 681 F.3d 471, 482 (D.C. Cir. 2012)).

201 *N.Y. v. NRC*. 681 F.3d at 482 (emphasis added).

202 *S. Carolina Elec. & Gas Co.* (Virgil C. Summer Nuclear Station, Unit 1), ALAB-710, 17 NRC 25, 28 (1983) ("Reviewing courts require agencies to explain their rulings, and, accordingly, we must expect no less from the hearing boards.").

detail the basis for the course of action chosen."[203] Without further elaboration, however, the Board announced that "the testimony provided by Clearwater's witnesses sufficiently illustrated the potentially disproportionate and adverse impacts on the EJ population surrounding Indian Point in the event of a severe accident."[204]

As discussed below, Clearwater's testimony on these issues was convincingly rebutted by Entergy and Staff witnesses, but the Board did not "confront" that testimony.[205] Given this directly competing evidence, the Board's failure to identify specifically which Clearwater testimony or other evidence supported its conclusion is grounds for Commission review and reversal of the Board's conclusions regarding the adequacy of the FSEIS.

c. The Board's conclusion that there would be potential disproportionate and adverse severe accident impacts to environmental justice populations is not supported by the record.

(i) <u>The record demonstrates that all populations will be adequately protected under the Indian Point, State, and local emergency plans.</u>

Referring only very generally to Clearwater witness testimony on "different sectors of the EJ population," the Board concluded that "*the higher risk* to the EJ population should be discussed in an adequate EJ analysis."[206] The Board did not, however, identify the testimony that supported its finding. Nor would it have any legal or factual basis to find such a higher risk. NRC regulations require that licensees include a range of protective actions—including sheltering and evacuation—when developing emergency plans for *all* members of the public

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203 *Phila. Elec. Co*. (Limerick Generating Station, Units 1 & 2), ALAB-857, 25 NRC 7, 14 (1987) ("Licensing boards must confront the facts and articulate in reasonable detail the basis for the course of action chosen."). (internal quotations omitted).

204 LBP-13-13 at 387.

205 *Limerick*, ALAB-857, 25 NRC at 14.

206 LBP-13-13 at 387 (emphasis added).

within the 10-mile emergency planning zone ("EPZ").[207] The record also shows that the Federal Emergency Management Agency ("FEMA") has reviewed and approved the Indian Point emergency plans.[208] Clearwater presented no contrary evidence or testimony on these points.

Given this, it is difficult to imagine how the Staff could, within an FSEIS, discuss a higher risk to EJ populations and thus have satisfied the Board's apparent concern. Such a discussion would have required the Staff to assume and accept the very opposite of FEMA's expert conclusion – *i.e.*, Staff would have had to identify specific EJ populations it anticipated would not be adequately protected and thus would suffer significant adverse impacts disproportionate to the surrounding population. Such a requirement cannot be squared with this Commission's repeated guidance that emergency planning review is outside the scope of license renewal or with a proper respect for the work of companion expert federal agencies. Thus, the Board clearly erred in finding the FSEIS deficient.

(ii) <u>The record demonstrates that no particular population segment will be adversely impacted by a severe accident.</u>

The Staff concluded that the potential impacts of license renewal to EJ populations would "mostly consist of radiological effects."[209] Given the extensive planning requirements and FEMA findings, it is unsurprising then that Staff witnesses provided further uncontroverted testimony that any radiation doses received by *any* population as a result of a severe accident at

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[207] 10 C.F.R. § 50.47(b)(10). *See also* NRC Staff Testimony of Jeffrey J. Rikhoff and Patricia A. Milligan Regarding Contention CW-EC-3A (Environmental Justice) at 23 (A29) (Mar. 30, 2012) ("NRC Staff EJ Testimony") (NRC000063).

[208] Letter from L. Canton, FEMA, to D. Tailleart, NRC (Dec. 5, 2011) (ENT000273) (transmitting the Final Exercise Report for the Indian Point Energy Center Radiological Emergency Preparedness Plume Pathway Exercise Conducted on September 14, 2010 (Nov. 30, 2011)). Entergy and the Staff also presented uncontroverted evidence regarding State and local emergency plan compliance with New York Executive Law Article 2-B, which requires that State and local emergency management plans include "programs to assist victims of disasters, with particular attention to the needs of the poor, the elderly, individuals with disabilities and other groups which may be especially affected." *See, e.g.,* Entergy EJ Testimony at 67 (A88) (ENT000258); Entergy Proposed Findings at 78 (¶157).

[209] Oct. 23, 2012 Tr. at 2774:18-20 (Rikhoff); *see also* NRC Staff EJ Testimony at 12 (A11) (NRC000063).

Indian Point would be within acceptable federal guidelines set by the U.S. Environmental Protection Agency ("EPA").[210] Clearwater presented no testimony or evidence to the contrary.

To support its finding that there would be disproportionate impacts on EJ populations, the Board focused on Ms. Milligan's testimony that, in the event of a severe accident, certain populations, such as those incarcerated at Sing Sing, could receive radiation doses higher than other populations that are immediately able to self-evacuate.[211] However, the Board failed to adequately address Ms. Milligan's testimony that, "*any doses received would be within the EPA dose guidelines*."[212] Thus, even if certain individuals might hypothetically receive a different or higher dose than others, such impacts would not be *adverse*, much less significant and adverse.[213]

Accordingly, Commission review and reversal of the Board's clearly erroneous finding regarding potential disproportionate and adverse impacts to EJ populations is warranted.

6. The Public Interest Warrants Commission Review of the Board's Decisions on CW-EC-3A.

Permitting these Board rulings to stand would have potential wide-ranging impacts, in that the door would be opened for petitioners to raise emergency planning issues through NEPA in license renewal proceedings. Furthermore, Clearwater's arguments regarding the potential for "problematic" evacuations and ineffective sheltering, to the extent they are even considered, are

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[210] NRC Staff EJ Testimony at 12 (A11) (NRC000063); Oct. 23, 2012 Tr. at 2774:20-23 (Rikhoff), 2762:6-25 (Milligan) ("All of these doses are well within the established federal guidelines."), 2780:17-25 (Milligan) (agreeing that "nobody would receive an inappropriate dose" beyond the regulatory limits).

[211] LBP-13-13 at 384 (quoting Oct. 23, 2012 Tr. at 2760:22-2761:2 (Milligan).

[212] Oct. 23, 2012 Tr. at 2760:22-2761:2 (Milligan) (emphasis added).

[213] Oct. 23, 2012 Tr. at 2762:24-2763:12, 2779:2-5 (Milligan). As discussed above, "[a] dosage increase that remains well under regulatory limits is not a 'high and adverse' effect." *Vogtle ESP*, LBP-07-3, 65 NRC at 266. Consistent with CEQ guidance, any dose within EPA guidelines would not be "significant (as employed by NEPA), or above generally accepted norms." CEQ Environmental Justice Guidance at 25 (Dec. 10, 1997) (ENT000266). The dose limits identified in the EPA guidelines were selected to "safeguard public health." EPA Guidance 400-R-92-001, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents at iii (1991) (ENT00284A).

fundamentally generic. Thus, the Board's finding that there is a higher risk of adverse consequences for those without cars or those who shelter in place necessarily is a criticism of the overall effectiveness of all emergency plans.

For these reasons and the reasons discussed above, the Commission should: (1) review and reverse the Board's decisions to admit the original and amended contention; or (2) in the alternative, review and reverse (a) the Board's rulings denying Entergy's January 30, 2012 and July 30, 2012 Motions in Limine, and (b) the Board's finding in LBP-13-13 that the FSEIS' EJ analysis was deficient.

V. CONTENTION NYS-35/36 (SAMA COST ESTIMATES)

A. Statement of the Case

1. Entergy's SAMA Analyses for Indian Point

In its original LRA, Entergy submitted a detailed site-specific evaluation of potentially cost-beneficial SAMAs.[214] Entergy prepared this analysis using state-of the-art practices and in full accordance with NEPA and the NRC-endorsed guidance in NEI 05-01.[215] The ER identified twelve potentially cost-beneficial SAMAs, but because they "do not relate to adequately managing the effects of aging," those SAMAs were "submitted for further engineering project cost-benefit analysis"[216] as part of ongoing plant operation. This fully satisfied the requirement in 10 C.F.R. § 51.53(c)(3)(ii)(L) to provide a SAMA analysis for IP2 and IP3 license renewal.

The Staff issued its Draft Supplemental Environmental Impact Statement ("DSEIS") in December 2008. In it, the Staff documented its independent and detailed technical review of

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214 *See* ER § 4.21, & App. E (ENT00015B).

215 *See id*.; *see also Pilgrim*, CLI-10-11, 71 NRC at 291 n.11 (citing NEI 05-01, Rev. A, Severe Accident Mitigation Alternatives (SAMA) Analysis, Guidance Document (Nov. 2005) ("NEI 05-01"); *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-01, 75 NRC 39, 55 (2012) (noting NRC endorsement of NEI 05-01).

216 ER at 4-73 (ENT00015B); *see also id*. at 4-73 to -77 (ENT00015B) (listing and describing potentially cost-beneficial SAMAs).

Entergy's SAMA analyses, and concluded that they were "reasonable and sufficient for the license renewal submittal."[217] The Staff also stated that because the SAMAs identified as potentially cost-beneficial do not relate to adequately managing the effects of aging during the PEO, they need not be implemented as part of license renewal pursuant to Part 54.[218] As demonstrated in Section V.C.2.b.ii, below, this analysis is fully consistent with unbroken precedent establishing that conditions of a renewed license must be related to managing aging effects.[219]

Approximately one year later, the Staff sought clarification regarding certain wind direction data used as inputs into the Indian Point's SAMA analysis, and Entergy addressed the Staff's specific questions by revising the SAMA analysis.[220] The *only changes to the SAMA analysis related to wind direction inputs*, but as a result, the number of cost-beneficial SAMAs changed. Three months later, NYS filed contentions NYS-35 and NYS-36, challenging Entergy's revised analysis.

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217 *See* NUREG-1437, Supp. 38, Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Regarding Indian Point Nuclear Generating Unit Nos. 2 and 3, Draft Report for Comment at 5-10 (Dec. 2008) ("DSEIS") (NYS00132G).

218 *See id.* at G-36 (NYS00132G).

219 *See Pilgrim*, CLI-10-11, 71 NRC at 293 n.26 (because none of the SAMAs identified as potentially cost-effective "bear on adequately managing the effects of aging, none need be implemented as part of the license renewal safety review, pursuant to 10 C.F.R. Part 54"); *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 & 2; Catawba Nuclear Station, Units 1 & 2), CLI-02-28, 56 NRC 373, 388 n.77 (2002) (upholding a DSEIS's conclusion that a SAMA did "not relate to adequately managing the effects of aging" during the PEO and "[t]herefore, it need not be implemented as part of license renewal pursuant to 10 CFR Part 54").

220 *See* NL-09-165, Letter from Fred Dacimo, Entergy, to NRC, License Renewal Application: Revised SAMA Analysis Using Alternate Meteorological Data (Dec. 11, 2009) ("Revised SAMA Analysis"), *available at* ADAMS Accession No. ML093580089. The revisions identified three more potentially cost-beneficial SAMAs for IP2, and three more for IP3, raising the total number of potentially cost beneficial SAMAs for Indian Point from 16 to 22. *See id*. at 31-32.

2. The Board's Admission of Contention NYS-35/36

More than two years into this proceeding, NYS-35 alleged for the first time that Entergy had not sufficiently completed the SAMA cost-benefit analysis.[221] Focusing on Entergy's stated intention to conduct further "engineering project" cost-benefit analysis to evaluate potential implementation, NYS argued that the failure to complete this evaluation violated NEPA.[222] NYS further alleged that SAMAs ultimately found sufficiently cost-effective "must be added as license conditions" for the renewed licenses.[223]

NYS-36 alleged that for nine specific SAMAs, refined estimates are unlikely to change the outcome.[224] NYS further asserted that the SAMA analysis would be "meaningless" without implementation of such "clearly cost-effective" SAMAs, and that the Staff had failed to provide a rational basis for not requiring implementation.[225]

Entergy objected to these contentions as untimely, because the revised SAMA analysis did not provide any materially-different information about the nature or content of the SAMA cost estimates, so any question about their completeness under NEPA should have been raised at the outset of the proceeding.[226] Entergy also argued that the SAMA analysis was complete as a matter of fact and law, and that NYS improperly conflated the Part 54 license renewal regulations with the Part 50 backfit process.[227] The Staff raised similar objections.[228]

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221 *See Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 & 3), CLI-10-30, 72 NRC 564-66 (2010) (citing State of New York's New and Amended Contentions Concerning the December 2009 Renalysis of Severe Accident Mitigation Alternatives at 13, 15-17, 22-35 (Mar. 11, 2010) ("New York's New and Amended Contentions"), *available at* ADAMS Accession No. ML00780366).

222 *See id*. (citing New York's New and Amended Contentions at 15-17, 22-35).

223 *See id*. (citing New York's New and Amended Contentions at 13).

224 *See id*. at 567 (citing New York's New and Amended Contentions at 36, 37, 39).

225 *See* New York's New and Amended Contentions at 40-41; *Indian Point*, CLI-10-30, 72 NRC at 567.

226 *See* Applicant's Answer to New York State's New and Amended Contentions Concerning Entergy's December 2009 Revised SAMA Analysis at 21-24 (Apr. 5, 2010) ("Entergy Answer to SAMA Contentions"), *available at* ADAMS Accession No. ML101450328.

227 *See id*. at 24-31.

In LBP-10-13, the Board admitted NYS-35 insofar as the contention alleged the DSEIS did not provide a rational basis for granting license renewal "without mandating a CLB backfit" to mandate implementation of cost-effective SAMAs.[229] The Board also admitted the portion of NYS-35 calling for "completion" of the SAMA analyses through further engineering cost analyses, and the portion of NYS-36 that alleged the Staff had violated NEPA by failing to explain why license renewal could be granted without requiring implementation of cost-beneficial SAMAs.[230]

3. Appeals of Contention Admissibility

Entergy and the Staff sought interlocutory review arguing, among other things, that LBP-10-13 ignored controlling NEPA precedent, improperly conflated Part 54 license renewal regulations with the Part 50 backfit process, and failed to distinguish between conceptual environmental alternative cost estimates prepared for purposes of NEPA and detailed engineering project cost estimates performed to assess the viability of a particular plant modification for current plant operations.[231]

The Commission denied interlocutory review, but referring to the Board's importation of Part 50 backfit matters into a NEPA analysis and a Part 54 proceeding, it observed that "[p]ortions of the Board's decision appear problematic," and that arguments against admissibility "were not without force."[232] Thus, review might be warranted later in the proceeding.[233]

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228 *See* NRC Staff's Answer to State of New York's New and Amended Contentions Concerning the December 2009 Severe Accident Mitigation Alternative Reanalysis at 16-35 (Apr. 5, 2010), *available at* ADAMS Accession No. ML100960165.

229 *Indian Point*, CLI-10-30, 72 NRC at 567 (quoting *Indian Point*, LBP-10-13, 71 NRC at 698).

230 *See id*. at 567-68 (quoting *Indian Point*, LBP-10-13, 71 NRC at 702).

231 *See generally* Applicant's Petition for Interlocutory Review of LBP-10-13 (July 15, 2010), *available at* ADAMS Accession No. ML102030050; *see also* NRC Staff's Petition for Interlocutory Review of the Atomic Safety and Licensing Board's Decision Admitting New York State Contentions 35 and 36 on Severe Accident Mitigation Alternatives (LBP-10-13) (July 15, 2010), *available at* ADAMS Accession No. ML101970197.

232 *Indian Point*, CLI-10-30, 72 NRC at 568.

4. Issuance of the FSEIS

In December 2010, the Staff issued its FSEIS, which, like the ER and DSEIS, concluded that none of the potentially cost-beneficial SAMAs were related to aging management and that they, therefore, would be addressed under the agency's oversight of the current operating licenses.[234] To specifically address the Board's ruling in LBP-10-13, the Staff substantially expanded its explanation of the SAMA implementation process.[235] It concluded, again, that "there is no regulatory basis to suggest that potentially cost-beneficial SAMAs unrelated to Part 54 requirements must be imposed as a backfit to the CLB, as a condition for license renewal."[236]

5. Motions for Summary Disposition

Following issuance of the FSEIS, NYS sought summary disposition of NYS-35/36, requesting that the FSEIS be revised to either direct all cost-effective SAMAs to be implemented as a condition of license renewal, or else provide a "rational basis as to why implementation is not required."[237] Alternatively, NYS asked that the application be denied.[238] Entergy and the Staff each filed cross-motions for summary disposition, arguing that the SAMA analysis was complete as a matter of fact and law, and that neither Part 54 nor Part 51 compels changes to the CLB as part of the license renewal process or implementation of mitigation measures unrelated to aging management.[239]

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233 *See id*.

234 *See* FSEIS at 5-11 (NYS00133C).

235 *See id*.

236 *Id*.

237 State of New York's Motion for Summary Disposition of Consolidated Contention NYS-35/36 at 2 (Jan. 14, 2011), *available at* ADAMS Accession No. ML110270252.

238 *See id*. at 3.

239 *See* Applicant's Consolidated Memorandum in Opposition to New York State's Motion for Summary Disposition of Contention NYS-35/36 and in Support of its Cross-Motion for Summary Disposition (Feb. 3, 2011) "), *available at* ADAMS Accession No. ML110460187; *see also* NRC Staff's (1) Cross-Motion for Summary Disposition, and (2) Response to New York State's Motion for Summary Disposition, of Contention NYS-35/36 (Severe Accident Mitigation Alternatives) (Feb. 7, 2011), *available at* ADAMS Accession No. ML110400012.

In LBP-11-17, the Board granted NYS's motion and denied the cross-motions.[240] It held that "Entergy's licenses cannot be renewed unless and until the NRC Staff reviews Entergy's completed SAMA analyses and either incorporates the result of these reviews into the FSEIS or, in the alternative, modifies its FSEIS to provide a valid reason for recommending the renewal of the licenses before the analysis of potentially cost-effective SAMAs is complete and for not requiring the implementation of cost-beneficial SAMAs."[241] The Board reasoned that "the NEPA review in license renewal proceedings, which is conducted pursuant to Part 51, is not limited to aging management-related issues."[242] Thus, the Staff "has the authority to require implementation of non-aging management SAMAs through its CLB backfit review under Part 50 or through setting conditions of the license renewal," and must exercise that authority, or explain why it did not.[243]

6. **Appeal of Summary Disposition**

Entergy sought Commission review and reversal of LBP-11-17, arguing that the Board erred in holding that: (a) Part 50 backfit rules established requirements that applied to the review of LRAs; (b) Part 54 and 51 regulations authorized the Staff to condition renewed licenses to require implementation of SAMAs unrelated to aging management; and (c) the license renewal SAMA analysis was incomplete.[244] The Staff filed an answer arguing that interlocutory review was warranted.[245] The Commission concluded that LBP-11-17 did not dispose of a "major

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240 *See Indian Point*, LBP-11-17, 74 NRC at 15.

241 *See id*. at 27.

242 *Id.* at 21 (citing *Pac. Gas & Elec. Co.* (Diablo Canyon Nuclear Power Plant, Units 1 & 2), LBP-10-15, 72 NRC 257, 288 (2010), *rev'd in part on other grounds*, CLI-11-11, __ NRC __ (Oct. 12, 2011)).

243 *Id.* at 22; *see also id*. (citing 10 C.F.R. § 51.103(a)(4)).

244 *See generally* Applicant's Petition for Review of LBP-11-17 Granting Summary Disposition of Consolidated Contention NYS-35/36 (July 29, 2011), *available at* ADAMS Accession No. ML11217A066.

245 *See Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 & 3), CLI-11-14, 74 NRC 801, 805-06 (2011).

segment of the case," and denied review without reaching the merits, and "without prejudice to Entergy's ability to seek review after the Board's final decision in this case."[246]

7. Developments Since CLI-11-14

Given the Board's unambiguous ruling that license renewal cannot be granted without further FSEIS supplementation, Entergy prepared and submitted refined project-level cost estimates to the NRC Staff for potentially cost beneficial SAMAs.[247] In making this submittal, Entergy did not waive any rights to appeal the SAMA Orders or concede that its original SAMA cost estimates were in any way insufficient or incomplete.[248] The Staff's review of this submittal is ongoing.[249]

As explained above, the PID, disposed of all Track 1 contentions including all admitted SAMA contentions. The Board also discussed the SAMA Orders and the Staff's review of Entergy's refined project-level cost estimates,[250] reiterating that:

> The FSEIS does not articulate a rational basis for not requiring Entergy to complete its SAMA review and for not requiring the implementation of cost-beneficial SAMAs prior to the relicensing of IP2 and IP3 and, therefore, violates NRC regulations, NEPA, and the APA [Administrative Procedures Act]. Renewed licenses cannot be issued unless and until this deficiency is corrected.[251]

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246 *Id*. at 811, 813-14. The Commission also noted that two other SAMA contentions were among fourteen contentions pending before the Board. *Id*. at 811. Those contentions were subsequently resolved in LBP-13-13.

247 NL-13-075, Letter from F. Dacimo, Entergy, to NRC Document Control Desk, License Renewal Application – Completed Engineering Project Cost Estimates for SAMAs Previously Identified as Potentially Cost-Beneficial (May 6, 2013) ("NL-13-075"), *available at* ADAMS Accession No. ML13127A459. The refined estimates were consistent with estimates Entergy prepares for project approvals, including details on construction, equipment, supplies, labor, etc. that are well-beyond the level of detail required for NEPA alternatives. NL-13-075 also discussed recent and directly-relevant Commission precedent governing SAMAs.

248 *See id.*, encl. at 2.

249 *See* NRC Staff's 24th Status Report In Response to the Atomic Safety and Licensing Board's Order of February 16, 2012, at 5-6 (Feb. 3, 2014), *available at* ADAMS Accession No. ML14034A369. Entergy's preparation and submission of the additional cost information demanded by the Board does not resolve the Board's decision in LBP-11-17, as the Staff has not yet decided whether Entergy's cost estimates will lead to another FSEIS supplement. Prompt Commission review and reversal of the SAMA Orders would obviate the need for review, which is not related to aging management and not required by NEPA or the Commission's regulations.

250 *See Indian Point*, LBP-13-13, slip op. at 7-8, 10, A-3.

251 *Id*. at A-3.

B. Issues Presented by the Board's SAMA Orders

1. Whether the Board erred in admitting NYS-35/36 when: (a) Entergy's Revised SAMA Analysis did not include any materially different information regarding the SAMA cost-benefit analysis or SAMA implementation that could trigger a timely late-filed contention; and (b) the contention sought to require, as a condition of license renewal, either SAMA implementation or further justification for not implementing individual SAMAs, absent a legal or regulatory basis to do so?

2. Whether the Board erred in granting summary judgment to NYS on NYS-35/36, when the Staff has no legal or regulatory authority to require additional cost-benefit analyses as a precondition of license renewal?

C. The Commission Should Take Review and Reverse the SAMA Orders Now

1. Review at this Stage Is Appropriate

Following a PID, the parties "should assert any claims of error that relate to the subject matter of the partial initial decision, whether the specific issue was admitted for hearing or not, and without regard to whether the issue was originally designated a separate 'contention' or a 'basis' for a contention."[252]

The Commission should take review of the Board's SAMA Orders now because these decisions relate to the subjects addressed in LBP-13-13, and not to any other pending matters in this proceeding. NYS-35/36 originally was part of the set of "Track 1" contentions which were heard in 2012. It was removed from Track 1, however, because the Board granted summary disposition in favor of NYS. Further, LBP-13-13 is a final order on all other pending SAMA issues in this proceeding, and therefore disposes of a major segment of the case.[253]

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[252] *PFS*, CLI-00-24, 52 NRC at 353.

[253] *See Indian Point*, LBP-13-13, slip op. at 293, 313 (resolving NYS-12B and 16B in favor of the NRC Staff); *see also Indian Point*, CLI-11-14, 74 NRC at 810-11 ("In *Pilgrim*, we explained that the basis for our allowing immediate appellate review of partial initial decisions rests on prior Appeal Board decisions permitting review of a licensing board ruling that "'disposes of . . . a major segment of the case or terminates a party's right to participate.'"). NYS has also taken the position that NYS-35/36 is related to its other Track 1 SAMA contentions. *See* State of New York Motion Seeking Leave to File an Additional Exhibit and Supplemental Proposed Findings of Fact and Conclusions of Law on Contention NYS-16B (May 17, 2013) (asserting that Entergy's revised cost estimates in NL-13-075 were related to a different SAMA contention, NYS-16B).

Thus, as specified in CLI-00-24, Entergy must seek review now, and the Commission should take review of the SAMA Orders at this juncture.[254]

2. The Commission Should Review and Reverse the SAMA Orders

a. Legal Standards Governing SAMA Analyses and Implementation

The SAMA analysis is a NEPA-driven mitigation alternatives analysis.[255] NEPA requires a "discussion of possible mitigation measures," but "imposes no substantive requirement that mitigation measures actually be taken."[256] As the Commission recently confirmed in response to a claim that NRC must "require" implementation of "all possible" mitigation alternatives, such a demand is inconsistent with NEPA, "which neither requires *nor authorizes* the NRC to order implementation of mitigation measures analyzed in an environmental analysis."[257] Likewise, a NEPA mitigation analysis "demands *no fully developed plan*, or detailed examination of specific measures which will be employed to mitigate adverse environmental effects."[258]

The scope of license renewal under Part 54 is limited to aging-related matters and does not require applicants to revisit CLB issues that fall outside that limited scope.[259] For this reason, and as the *Indian Point* Board has acknowledged, "SAMAs unrelated to aging management need not be implemented pursuant to the NRC's license renewal *safety* view under Part 54."[260] The ultimate decision on whether to require a facility to modify its CLB to

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254 *See PFS*, CLI-00-24, 52 NRC at 353.

255 *See Pilgrim*, CLI-12-15, 75 NRC at 706 (2012); *Pilgrim*, CLI-12-01, 75 NRC at 41.

256 *Robertson*, 490 U.S. at 352, 353 n.16; *see also Cnty. of Rockland v. FAA*, 335 Fed.Appx. 52, 55 (D.C. Cir. 2009) (quoting *Robertson*, 490 U.S. at 352).

257 *Pilgrim*, CLI-12-10, 75 NRC at 488 (emphasis added); *see also Mass. v. NRC,* 708 F.3d 63, 81 n.27 (1st Cir. 2013) ("To the extent Massachusetts seeks to impose a substantive requirement that the NRC must require certain mitigation measures under NEPA, that is foreclosed by the fact that NEPA is not outcome driven.").

258 *Pilgrim*, CLI-10-11, 71 NRC at 316 (emphasis added).

259 *Turkey Point*, CLI-01-17, 54 NRC at 7-9 & 21.

260 *Indian Point*, LBP-11-17, 74 NRC at 25 (citing *Pilgrim*, CLI-10-11, 71 NRC at 293 n.26).

implement any particular SAMA is outside of the scope of the LRA review.[261] Consistent with this precedent, the Commission recently reiterated that the NRC will consider any new information on severe accident mitigation under its ongoing reactor oversight.[262]

b. The Board Should Not Have Admitted Contention NYS-35/36

(i) The Consolidated Contention Was Untimely

The Commission should reverse the Board's admission of NYS-35/36 because the proposed contentions were untimely. The purportedly new information that triggered NYS-35/36 was not materially different from what was previously available over two years earlier.[263]

As a threshold matter, NYS has acknowledged that NYS-35/36 raises purely legal issues.[264] Those issues are: (a) whether the Staff must either require implementation of potentially cost-beneficial SAMAs or better explain why particular non-aging related SAMAs were not required as a condition of license renewal; and (b) whether Entergy's current SAMA analysis, particularly the SAMA cost estimates, is complete under Part 51 and NEPA as a matter of law. As Entergy argued at the admissibility stage, nothing about the specific inputs or

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261 *See McGuire*/*Catawba*, CLI-02-28, 56 NRC at 388 n.77 ("[T]he ultimate agency decision on whether to require facilities . . . to implement any particular SAMA will fall under a Part 50 current licensing basis review.").

262 *Pilgrim*, CLI-12-15, 75 NRC at 707-08.

263 *See* 10 C.F.R. 2.309(f)(2)(ii) (2010). Since LBP-10-13, the Commission has clarified its timeliness rules for late-filed contentions. *See* Final Rule, Amendments to Adjudicatory Process Rules and Related Requirements, 77 Fed. Reg. 46,562, 46,582-83 (Aug. 3, 2012). The requirements relevant to the appeal of LBP-10-13, however, have not changed, as the current 10 C.F.R. § 2.309(c)(1)(i)-(iii) retain the same standards previously codified at Section 2.309(f)(2)(i)-(iii). Entergy cites to the timeliness regulations in effect in 2010.

264 *See* State of New York's Motion for Leave to File New and Amended Contentions Concerning the December 2009 Renalysis of Severe Accident Mitigation Alternatives at 14 (Mar. 11, 2010), *available at* ADAMS Accession No. ML100780366 ("Contentions 35 and 36 are essentially based on legal deficiencies in the December 2009 Revised SAMA Analysis."). New York later sought to overcome Entergy and the Staff's timeliness objections by disavowing this point. *See* State of New York Combined Reply to Entergy and the NRC Staff Answers to the State's New and Amended Contentions Concerning the December 2009 Severe Accident Mitigation Alternatives Reanalysis at 26 n.7 (Apr. 12, 2010), *available at* ADAMS Accession No. ML101160415. But it is axiomatic that a contention cannot be amended through a reply. *See Nuclear Mgmt. Co., LLC* (Palisades Nuclear Plant), CLI-06-17, 63 NRC 727, 732 (2006).

methods used in its 2009 SAMA revisions was *materially different from what was previously available with respect to the legal issues raised in NYS-35/36*.[265]

As to the first legal issue, NYS filed NYS-35/36 following Entergy's SAMA analysis revisions that specifically addressed a narrow Staff question concerning meteorological data inputs. This was not a completely new SAMA analysis. While the new data inputs led to changes in the results of the cost-benefit analyses, Entergy used precisely the same NRC-approved methodology used in the original SAMA analysis.[266] Thus, the changes in meteorological data inputs are simply irrelevant to the question of whether the Staff must require implementation of identified potentially cost-beneficial SAMAs, or further justify why it is not.

As to the second legal issue, the 2009 revisions provided no materially different information regarding the completeness of the SAMA cost-benefit analysis under NEPA and Part 51.[267] The original LRA states that "since the SAMA analysis is conservative and is not a complete engineering project cost-benefit analysis, it does not estimate all of the benefits or costs of a SAMA."[268] This is fully consistent with NEPA and Commission precedent interpreting NEPA, which do not require a "fully developed" engineering project cost analysis.[269] Nothing in the December 2009 submittal changed these facts about the SAMA analysis. Thus, sufficient information was available to file NYS-35/36 more than two years before NYS did, rendering it untimely under 10 C.F.R. § 2.309(f)(2)(ii) (2010).[270]

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265 *See* Entergy Answer to SAMA Contentions at 21-24.

266 *See id.* at 2, 10-11; *see also* Revised SAMA Analysis at 5, 31-32.

267 Contrary to the Board's statement that Entergy has "stated . . . that it will conclude its SAMA review after license renewal is complete," *Indian Point*, LBP-11-17, 74 NRC at 26, Entergy has never acknowledged nor does it believe that its SAMA analysis is not complete for purposes of compliance with NEPA requirements for license renewal.

268 ER at 4-73 (ENT00015B).

269 *Pilgrim*, CLI-10-11, 71 NRC at 316.

270 *See*, *e.g.*, *Oyster Creek*, CLI-09-07, 69 NRC at 272-75 (upholding the rejection of untimely contentions, despite the existence of some new information, when the specific information challenged by the petitioners in each

In response to Entergy's and the NRC's timeliness arguments, the Board simply pointed to the allegedly "new cost-benefit picture" created by the new meteorological inputs.[271] But, as explained in Section V.C.2.b.i, above, the changes in meteorological input data and number of cost-beneficial SAMAs are immaterial to the strictly legal issues raised in NYS-35/36.

In sum, NYS's arguments could and should have been raised at the time of its initial petition. The Board's decision that NYS-35/36 was timely is erroneous and should be reversed.

(ii) The Consolidated Contention Is Substantively Inadmissible

NYS-35/36 are also inadmissible under 10 C.F.R. § 2.309(f)(1), because NYS's claims are contrary to NEPA and the Commission's regulations.[272] The admission of NYS-35/36 rests on the faulty premise that NEPA, when read in conjunction with Parts 50 and 54, authorizes NRC to compel implementation of cost beneficial SAMAs regardless of their nexus to aging management.[273] This premise runs counter to one of the most fundamental and settled precepts of NEPA law, as established by the U.S. Supreme Court: "NEPA itself does not mandate particular results, but simply prescribes the necessary process."[274]

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contention was long available). At a minimum, NYS should have filed its contentions following the December 2008 DSEIS, which, as shown in Section V.C.2.b.i, above, clearly sets forth the Staff's position on NYS's issues.

271 *Indian Point,* LBP-10-13, 71 NRC at 696. The Board also cited its own order establishing a fixed deadline for "new contentions . . . which arise out of Entergy's revised SAMA submissions . . . ." *Id*. at 677; *see also id*. at 696 n.126. But an administrative deadline for new contentions does not and cannot dispense with the petitioner's burden to show that the new information is in fact materially different from what was previously available—with respect to its actual proposed contention. *Tex. Utils. Elec. Co.* (Comanche Peak Steam Electric Station, Units 1 & 2), CLI-88-12, 28 NRC 605, 609 (1988) (holding that the petitioner bears the burden of demonstrating the timeliness of its contentions).

272 *See Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 & 4), LBP-01-6, 53 NRC 138, 159-60, *aff'd*, CLI-01-17, 54 NRC 3 (2001) (rejecting a contention that a license renewal applicant was required to prepare a probabilistic risk assessment that was not required under the regulations).

273 *See Indian Point*, LBP-10-13, 71 NRC at 696-98. NYS-35/36 raised similar legal issues at both the contention admissibility and summary disposition stages. Therefore, where appropriate, this section addresses the analysis in LBP-11-17, in areas where that decision provides a fuller discussion of the legal issues raised in the contention.

274 *Robertson*, 490 U.S. at 350 (citing *Strycker's Bay Neighborhood Council, Inc. v. Karlen*, 444 U.S. 223, 227-228 (1980) (per curiam); *Vt. Yankee Nuclear Power Corp. v. Natural Res. Def. Council, Inc.*, 435 U.S. 519, 558 (1978)).

Notably, the Commission has approved dozens of renewed operating licenses which identified potentially cost-beneficial SAMAs. But the NRC has never mandated implementation of SAMAs unrelated to aging management as a condition of license renewal, or required a more detailed explanation for not doing so, beyond the well-established reason that none of the identified SAMAs related to aging management. Indeed, the Board's rationale for the SAMA Orders has been repeatedly rejected, most notably in a series of rulings in the *Pilgrim* license renewal proceeding that the Commission issued *after* the Indian Point SAMA Orders.[275] The NRC renewed the Pilgrim license in 2012, but the renewed license did not require the implementation of non-aging-related SAMAs.[276] Indian Point is no different, and the Board's reasons for departing from longstanding precedent and practice lack legal justification.

(a) *Entergy's SAMA Cost-Benefit Analysis Satisfies Part 51 and Part 54*

The Board's determination rests, in part, on the unfounded supposition that Entergy improperly deferred completion of the necessary SAMA analysis until after license renewal.[277]

Part 51 requires license renewal applicants to perform site-specific SAMA analyses,[278] but this requirement is "tempered by a practical rule of reason."[279] In this regard, "NEPA

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275 *See Pilgrim*, CLI-12-01, 75 NRC at 39 (explaining that the SAMA analysis is intended to indentify additional mitigation measures that might further reduce the already-SMALL severe accident risk, and that the SAMA analysis is supplemental to the NRC's safety regulations); *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-06, 75 NRC 352, 374 (2012) (emphasizing that the current regulatory and oversight process provides reasonable assurance of compliance with the CLB, which can be adjusted by the Commission outside of the license renewal process); *Pilgrim*, CLI-12-10, 75 NRC at 488 (holding that NEPA, "neither requires *nor authorizes* the NRC to order implementation of mitigation measures analyzed in an environmental analysis").

276 *See* Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station) Docket No. 50-293, Renewed Facility Operating License at 7 (May 9, 2012). This was because "[t]he potentially cost-beneficial SAMAs do not relate to adequately managing the effects of aging during the period of extended operation; therefore, they need not be implemented as part of license renewal pursuant to 10 CFR Part 54." NUREG-1437, Supp. 29, Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Regarding Pilgrim Nuclear Power Station, Final Report at 5-5 (July 2007), *available at* ADAMS Accession No. ML071990020.

277 *See Indian Point*, LBP-10-13, 71 NRC at 698; *see also Indian Point*, LBP-11-17, 74 NRC at 26.

278 10 C.F.R. § 51.53(c)(3)(ii)(L).

279 *Pilgrim*, CLI-10-22, 72 NRC at 208 (quoting *Cmtys., Inc. v. Busey*, 956 F.2d 619, 626 (6th Cir. 1992)).

requires [applicants and] the NRC to provide a 'reasonable' mitigation alternatives analysis, containing 'reasonable' estimates."[280] Entergy's original SAMA analysis and the 2009 revisions did precisely that by following NRC-approved guidance and state-of-the-art practices in providing sufficient information for the Staff to take a "hard look" at SAMAs for purposes of license renewal.

Entergy has therefore supplied "sufficient facts" to allow the Staff to explain its conclusions and to fully satisfy its "hard look" obligations under NEPA,[281] so the SAMA analysis is complete for purposes of NEPA and Part 51. NEPA does not require a fully developed engineering project cost estimate.[282] Entergy's statement, in its ER, that it plans to prepare more refined engineering project cost evaluations of the potentially cost-beneficial SAMAs for possible implementation as part of current plant operation does not negate Entergy's and the Staff's demonstrated *current* compliance with NEPA for purposes of license renewal.

In short, the Board erred as a matter of law by failing to address the key distinction between the conservatively low, conceptual cost estimates prepared under NEPA and subsequent internal engineering project analyses that an applicant may perform to assess the viability of implementing a particular plant modification under its current operating procedures.

(b) *NEPA and Part 51 Provide No Authority to Require SAMA Implementation*

As previously shown, SAMAs unrelated to managing the effects of aging need not be implemented under Part 54, even if they are potentially cost effective.[283] The Board found the Commission's precedent from the *Pilgrim* and *McGuire/Catawba* proceeding "inapposite"

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280 *Id.*

281 *Indian Point*, LBP-10-13, 71 NRC at 698.

282 *See Pilgrim*, CLI-10-11, 71 NRC at 316.

283 *See Pilgrim*, CLI-10-11, 71 NRC at 293-94 n.26; *McGuire*/*Catawba*, CLI-02-28, 56 NRC at 388 n.77.

because the IPEC SAMAs were "analyzed under [the NRC's] Part 51 environmental review," not Part 54.[284] That explanation does not withstand scrutiny.

First and foremost, as a matter of law, NEPA and Part 51 contain no action-forcing mechanisms.[285] Moreover, the situations in the *Pilgrim* and *McGuire/Catawba* proceedings are indistinguishable from this proceeding. The IPEC SAMAs were "analyzed under [the NRC's] Part 51 environmental review," exactly as in *Pilgrim*, *McGuire/Catawba*, and all other license renewal proceedings.[286]

Thus, the Board erred as a matter of law when it determined that NEPA and Part 51 provide the Staff with authority for conditioning renewed licenses to require implementation of SAMAs unrelated to aging management.

(c) *The Backfit Regulations Do Not Establish License Renewal Requirements*

In admitting NYS-35/36, the Board erroneously posits that the Staff may "institute a backfit *prior to license renewal* under Part 50 as a result of its SAMA review."[287] Again, the Board's ruling is contrary to established law, in that the Board has improperly conflated the disparate regulatory processes set forth in Parts 54, 51, and 50.

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[284] *Indian Point*, LBP-11-17, 74 NRC at 25 (citing *McGuire/Catawba*, CLI-02-28, 56 NRC at 388 n.77; *Pilgrim*, CLI-10-11, 71 NRC at 293-94 n.26).

[285] *Robertson*, 490 U.S. at 352, 353 n.16 (NEPA "imposes no substantive requirement that mitigation measures actually be undertaken.").

[286] The Board also erroneously accepted NYS's claim that the Staff could have relied upon 10 C.F.R. § 54.33(c) as a basis for compelling Entergy to implement environmental mitigation measures identified through the Part 51 NEPA process. *See Indian Point*, LBP-11-17, 74 NRC at 26. SAMA implementation is a matter considered under Part 50, not as a license renewal matter. *See*, *e.g.*, *McGuire/Catawba*, CLI-02-28, 56 NRC at 388 n.77. Further, the only "conditions for the license renewal", *Indian Point*, LBP-11-17, 74 NRC at 26, relevant to Section 54.33(c) are possible *amendment or supplementation* of current operating license conditions related to a licensee's ongoing environmental monitoring, reporting, and recordkeeping obligations under Section 50.36b, not mitigation measures such as plant modifications. Thus, license conditions that were not previously imposed under Section 50.36(b) as part of the current operating license are irrelevant to Section 54.33.

[287] *Indian Point*, LBP-10-13, 71 NRC at 697 (emphasis added); *see also Indian Point*, LBP-11-17, 72 NRC at 26 (reaching the same conclusion).

First, controlling precedent holds that backfit requests under Part 50 are not permissible in a license renewal proceeding.[288] Second, the Board's novel view of Section 50.109 is inconsistent with the regulatory history of Part 54, which clarifies the relationship between Part 54 and the backfit rule:

> If the staff or the licensee seeks to make changes in a plant's licensing basis *for reasons other than age-related degradation*, they should be pursued either in the existing operating license or the renewed license, *once issued*. Staff-initiated changes would be evaluated in accordance with the backfit rule, 10 CFR 50.109.[289]

In its May 1995 revisions to Part 54, the Commission reaffirmed that it "does not intend to impose requirements on a licensee that go beyond what is necessary to adequately manage aging effects."[290] The Board's reliance on the backfit rule in the SAMA Orders cannot be reconciled with these settled and Commission-endorsed principles.[291]

c. The Board Erred in Granting Summary Disposition

Relying upon the same erroneous conclusions discussed in the previous Sections, the Board granted summary disposition in favor of NYS in LBP-11-17. As shown in Section V.C.2.b.ii, above, this decision was contrary to established law and should be reversed under 10

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288 *See Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-06-26, 64 NRC 225, 226-27 (2006); *see also Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Unit 1), LBP-07-11, 66 NRC 41, 96-97 (2007) (denying petitioners' request for fire barrier system backfits and noting that a petition for backfits is essentially a request for enforcement action and is "not cognizable in a license renewal adjudication"); *N. Anna*, CLI-07-27, 66 NRC at 233 (noting the limited applicability of the backfit rule).

289 Proposed Rule: Nuclear Power Plant License Renewal, 55 Fed. Reg. 29,043, 29,047 (July 17, 1990) (emphasis added).

290 1995 License Renewal SOC, 60 Fed. Reg. at 22,490.

291 These same principles are reflected in NRC guidance documents. *See*, *e.g.*, NRR Office Instruction LIC-202, Rev. 2, *Procedures for Managing Plant-Specific Backfits and 50.54(f) Information Requests* at 1 (May 17, 2010), *available at* ADAMS Accession No. ML092010045 ("[I]f the NRC proposes to address safety issues outside the [aging management] scope of Part 54 … then any actions necessary to address such out-of-scope safety issues are subject to the Backfit Rule."); NUREG-1850, Frequently Asked Questions on License Renewal of Nuclear Power Reactors at 4-34 (Mar. 2006), *available at* http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1850/sr1850_faq_lr.pdf (stating that plant enhancements that appear to be cost-beneficial but are unrelated to aging management during the PEO "are considered as current operating issues and are further evaluated as changes that might appropriately be made under the current operating license rather than as a license renewal issue").

C.F.R. § 2.341(b)(4)(ii). For purposes of brevity, Entergy adopts and incorporates the legal arguments in that Section here, as the legal arguments against admissibility of NYS-35/36 also support reversal of the Board's grant of summary disposition. As demonstrated above, NYS did not carry its burden of showing that it is entitled to a decision as a matter of law.[292]

Moreover, LBP-11-17 is based upon additional legal and factual errors that warrant reversal under 10 C.F.R. § 2.341(b)(4)(i) and (ii). In LBP-11-17 the Board found that the FSEIS fails "to articulate a rational basis for not requiring Entergy to complete its SAMA review and for not requiring the implementation of cost-beneficial SAMAs prior to the license renewal . . . ."[293] On the contrary, the Staff took the requisite "hard look" at potential SAMAs under NEPA, as shown in the detailed technical evaluation in Appendix G of the FSEIS, and articulated a rational legal basis for not requiring implementation of potentially cost-beneficial SAMAs as a condition of license renewal.

In Section 5.2.6 of the FSEIS, the Staff fully explained why it was not ordering Entergy to implement the non-aging related SAMAs, logically concluding that it lacked a regulatory basis to require implementation as a condition of license renewal.[294] This conclusion is rational and complies with governing law and longstanding precedent.[295] Thus, even if the Commission does not reverse the admission of NYS-35/36, the Board's grant of summary disposition to NYS should be reversed, and summary disposition should be granted to Entergy and the Staff.

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[292] *See Pilgrim*, CLI-10-11, 71 NRC at 297; *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-08-28, 68 NRC 658, 673 (2008) (stating that the summary disposition standard places the burden of proof on the moving party).

[293] *Indian Point*, LBP-11-17, 74 NRC at 26.

[294] *See supra* § V.C.2.b.ii.

[295] *See* 10 C.F.R. §§ 54.29(a), 51.95(c).

d. The Public Interest Warrants Review of the SAMA Orders

This appeal brings to the Commission an important legal question that directly affects the manner in which the Staff must discharge its obligations under NEPA, the AEA, and NRC regulations governing LRAs. As shown above, the evaluation of SAMAs in the FSEIS is entirely consistent with NEPA, the Commission's regulations, and all prior license renewal reviews. Allowing the SAMA Orders to stand would represent a fundamental reversal of policy regarding the scope of license renewal proceedings, and effect a departure from precedent set in more than 70 renewed licenses that the NRC has previously issued. This appeal therefore raises a substantial question of law, policy, and discretion, and review of the SAMA Orders would be in the public interest, consistent with 10 C.F.R. § 2.341(b)(4)(iii) and (v).[296]

VI. CONCLUSION

For the foregoing reasons, the Commission should accept review of LBP-13-13 and its preceding decisions and reverse the Board's rulings related to contentions NYS-8 and NYS-35/36, and uphold the Staff's FSEIS analysis on CW-EC-3A.

Respectfully submitted,

Executed in accord with 10 C.F.R. § 2.304(d)

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Dated at Washington, DC
this 14th day of February 2014

[296] *See Vt. Yankee*, CLI-10-17, 72 NRC at 13.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	Docket Nos. 50-247-LR and 50-286-LR
ENTERGY NUCLEAR OPERATIONS, INC.	)	
(Indian Point Nuclear Generating Units 2 and 3)	)	
	)	February 14, 2014

CERTIFICATE OF SERVICE

Pursuant to 10 C.F.R. § 2.305 (as revised), I certify that, on this date, copies of "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)" were served upon the Electronic Information Exchange (the NRC's E-Filing System) in the above-captioned proceeding.

Signed (electronically) by Lance A. Escher

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ATTACHMENT 1

Comparison of the Electrical Transformers Contentions in the *Indian Point* and the *Seabrook* License Renewal Proceedings

Note: This attachment identifies changes from the wording of the electrical transformers contention (Friends/NEC Contention 2) and the Declaration of Mr. Paul Blanch that were submitted in the *Seabrook* license renewal proceeding to the similar contention (Contention NYS-8) and Declaration of Mr. Paul Blanch that were submitted in the *Indian Point* license renewal proceeding. Portions that were added from the *Seabrook* version to the *Indian Point* version are indentified with an underline, and portions that were deleted are indicated by ~~strikethrough~~. Simple formatting changes are not tracked.

Contention Language

THE LRA FOR ~~SEABROOK~~ IP2 AND IP3 VIOLATES 10 C.F.R. §§ 54.21(a) AND 54.29 BECAUSE IT FAILS TO INCLUDE AN AGING MANAGEMENT PLAN FOR EACH ELECTRICAL TRANSFORMER WHOSE PROPER FUNCTION IS IMPORTANT FOR PLANT SAFETY.

BASIS

1. There are numerous electrical transformers that perform a function described in §§ 54.4(a)(1)/(2) and (3). Transformers function without moving parts or without a change in configuration or properties as defined in that regulation.

2. Failure to properly manage aging of Electrical Transformers may compromise:

a. The integrity of the reactor coolant pressure boundary;

b. The capability to shut down the reactor and maintain it in a safe shutdown condition; or

c. The capability to prevent or mitigate the consequences of accidents, which could result in potential offsite exposures comparable to those referred to in §§ 50.34(a)(1), 50.67(b)(2), or § 100.11 of this chapter, as applicable. 10 C.F.R. §§ 54.4(a)(1)(2) and (3).

3. The consequence of failures of Electrical Transformers may result in accidents beyond the Design Basis Accidents resulting in exposures to the public exceeding 10 C.F.R. § 100 limits.

4. Failure to properly manage aging of electrical transformers could result in loss of emergency power to ~~safety equipment and vital busses~~the 480 volt safety equipment and 6.9kV busses, including all station blackout loads. Appendix A, Page A-35 of the UFSAR supplement describes a Structures Monitoring Program that includes a program for monitoring "transformer/switchyard support structures" yet there is no APM described for transformers within the scope of 10 C.F.R. § 54.21(a)(1)(I).

5. Attachment 2 of ~~T~~the LRA (p.2.4-22) also discusses the need for an AMP for "transformer support structures" based on the criterion of 10 CFR § 54.4(a)(3).

SUPPORTING EVIDENCE

6. The role of ~~most~~some of the transformers in providing power for safety functions is ~~normally~~ described in Chapter 8 of the UFSAR for each Unit on pp. 1167-68, 1333-43 of the UFSAR for IP3 and pp. 1039-50 of the UFSAR for IP2. ~~The Seabrook LRA provides an FSAR supplement as required by 10 CFR 54.21.~~

7. The UFSAR for IP2 is a one line diagram of the electrical plan for IP2, which identifies some of the transformers and their central role in the electrical system of the plant. IP2 UFSAR, figure 8.2.1, 8.2.2. A similar drawing for IP3 has not been provided with the LRA. ~~While other License renewal applications contained a copy of relevant sections of the UFSAR, Seabrook did not provide a copy and only reference applicable sections of the UFSAR.~~

8. ~~Without a copy of the UFSAR it is not possible to identify all of the transformers within the scope of 10 CFR 54.4, however it is well known that many transformers perform functions described in 10 CFR 54 and are passive devices in that they contain no moving parts and do not undergo a change of properties or state.~~

~~9. Transformers are active devices within the scope of 10 CFR 54.4 yet the licensee has not provided any AMP to assure~~

~~10.~~ In D-RAI 2.5-1 the Staff identifies some of the transformers for which AMP should be provided but which are not included in the LRA.

For purposes of the license renewal rule, the staff has determined that the plant system portion of the offsite power system that is used to connect the plant to the offsite power source should be included within the scope of the rule. This path typically includes switchyard circuit breakers that connect to the offsite system *power transformers (startup transformers), the transformers themselves*, the intervening overhead or underground circuits between circuit breaker and transformer and transformer and onsite electrical system, and the associated control circuits and structures. Ensuring that the appropriate offsite power system long-lived passive structures and components that are part of this circuit path are subject to an AMR will assure that the bases underlying the SBO requirements are maintained over the period of extended license.

September 21, 2007 Draft Requests for Additional Information Indian Point Nuclear Generating Unit Nos. 2 and 3 License Renewal Application at p. 10.

Declaration of Paul Blanch

~~28~~21. There are numerous electrical transformers that perform a function described in §§ 54.4(a)(1)/(2) and (3). Transformers function without moving parts or without a change in configuration or properties as defined in that regulation.

~~29~~22. Failure to properly manage aging of Electrical Transformers may compromise:

a. The integrity of the reactor coolant pressure boundary;

b. The capability to shut down the reactor and maintain it in a safe shutdown condition; or

c. The capability to prevent or mitigate the consequences of accidents~~,~~ which could result in potential offsite exposures comparable to those referred to in §§ 50.34(a)(1), 50.67(b)(2), or § 100.11 of this chapter, as applicable. 10 C.F.R. §§ 54.4(a)(1)(2) and (3).

~~30~~23. The consequence of failures of Electrical Transformers may result in accidents beyond the Design Basis Accidents resulting in exposures to the public exceeding 10 C.F.R. § 100 limits.

~~31~~24. Failure to properly manage aging of electrical transformers could result in loss of emergency power to ~~safety equipment and vital busses~~the 480 volt safety equipment and 6.9kV busses~~,~~ including ~~all~~ station blackout loads. Appendix A, Page A-35 of the UFSAR supplement describes a Structures Monitoring Program that includes a program for monitoring "transformer/switchyard support structures" yet there is no APM described for transformers within the scope of 10 C.F.R. § 54.21(a)(1)(I).

~~32. The LRA also discusses the need for an AMP for "transformer support structures" based on the criterion of 10 CFR § 54.4(a)(3).~~

~~33. The role of most of the transformers in providing power for safety functions is normally described in Chapter 8 of the UFSAR. The Seabrook LRA provides an FSAR supplement as required by 10 CFR 54.21.~~

~~34. While other License renewal applications contained a copy of relevant sections of the UFSAR, Seabrook did not provide such copy and only referenced applicable sections of the UFSAR.~~

~~35. Without a copy of the UFSAR it is not possible to identify all of the transformers within the scope of 10 CFR 54.4, however it is well known that many transformers perform functions described in 10 CFR 54 and are passive devices in that they contain no moving parts and do not undergo a change of properties or state.~~

~~36. Transformers are active devices within the scope of 10 CFR 54.4 yet the licensee has not provided any AMP to assure ???????~~