

**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.)	
)	March 28, 2012
(Indian Point Nuclear Generating Units 2 and 3))	

**ENTERGY'S STATEMENT OF POSITION REGARDING
CONSOLIDATED CONTENTION NYS-16B
(SEVERE ACCIDENT MITIGATION ALTERNATIVES ANALYSIS)**

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Pursuant to 10 C.F.R. § 2.1207(a)(1) and the Atomic Safety and Licensing Board’s (“Board”) Order Granting NRC Staff’s Unopposed Time Extension Motion and Directing Filing of Status Updates,¹ Entergy Nuclear Operations, Inc. (“Entergy”) submits this Statement of Position (“Statement”) on Consolidated Contention NYS-16B (“NYS-16B”) proffered by New York State (“NYS”). This Statement is supported by the Testimony of Entergy Witnesses Lori Potts, Kevin O’Kula, Grant Teagarden, and Jerry Riggs on Consolidated Contention NYS-16B (Severe Accident Mitigation Analysis) (“Entergy Testimony”) (ENT000003), and the exhibits thereto (ENT0000004 through ENT000011 and ENT000013 through ENT000027). As discussed below, NYS-16B is factually deficient in that it challenges the use of presumptively correct reported census data and relies instead on superseded census data and unreasonable commuter population assumptions. Further, it is legally deficient in that, even if NYS’s claims were assumed to be factually accurate, it would not change the outcome of Entergy’s severe

¹ Licensing Board Order Granting NRC Staff’s Unopposed Time Extension Motion and Directing Filing of Status Updates (Feb. 16, 2012) (unpublished).

accident mitigation alternatives (“SAMA”) analysis. Accordingly, the contention should be resolved in favor of Entergy and the Nuclear Regulatory Commission (“NRC” or “Commission”) Staff.

I. PRELIMINARY STATEMENT

NYS-16B relates to Entergy’s and the NRC Staff’s compliance with the National Environmental Policy Act (“NEPA”),² as implemented by the NRC’s 10 C.F.R. Part 51 regulations. Having abandoned the original core of its contention,³ NYS-16B now challenges only one aspect of Entergy’s severe accident mitigation alternatives (“SAMA”) analysis for Indian Point Nuclear Generating Units 2 and 3 (“IP2” and “IP3”), also called Indian Point Energy Center (“IPEC”). Specifically, it challenges the adequacy of the year 2035 population estimate used in the IPEC SAMA analysis.⁴ NYS alleges that the Staff’s December 2010 final supplemental environmental impact statement (“FSEIS”) for IPEC is legally deficient “because it accepts a SAMA analysis predicated on inaccurate population estimates.”⁵

As support, NYS relies on the testimony of its proffered expert, Dr. Stephen Sheppard. Dr. Sheppard asserts that Entergy’s 2035 population estimate is materially inaccurate because Entergy allegedly did not: (1) adjust for purported “census undercount” in the 2000 U.S. Census data underlying its population estimate; or (2) account for commuters entering the 50-mile radial region surrounding IPEC. These claims, however, lack basis in law and in evidence.

² 42 U.S.C. § 4321 *et seq.* (2006).

³ NYS has chosen not to pursue the original core of its admitted contention, *i.e.*, its challenge to Entergy’s use of the Gaussian air dispersion model in the MACCS2 computer code. *See* State of New York, Entergy Nuclear Operations, Inc., and NRC Staff Joint Stipulation at 2 (Jan. 23, 2012) (“Joint Stipulation”) (“[T]he State has chosen not to pursue the claim that Entergy’s air dispersion model is being used beyond its range of validity and does not accurately predict the geographic dispersion of radionuclides released in a severe accident and, therefore, it is no longer at issue in this contention.”).

⁴ *See* State of New York Initial Statement of Position [on] Contention NYS-16/16A/16B at 6-7 & n.6 (Dec. 16, 2011) (“NYS Statement of Position”) (NYS000206).

⁵ *Id.* at 14.

First, as to its census undercount argument, NYS cites no regulation (nor can it) that requires consideration of “census undercount.” That is not surprising, because agencies at all levels of government routinely rely on reported, unadjusted census data—that is, data that does not consider purported undercount—in assessments performed to comply with NEPA and other legal obligations. Entergy’s and NRC Staff’s reliance on the U.S. Census Bureau’s 2000 population data is similarly reasonable and appropriate here. NEPA’s “rule of reason” certainly does not compel this Board to probe the adequacy of data furnished by the federal agency that is duly authorized—indeed, is required—by statute to perform censuses, to analyze the data obtained, and to compile those data in a form suitable for its intended uses.

Indeed, Dr. Sheppard’s claim that the 2000 Census underestimated the population is directly contrary to the U.S. Census Bureau’s own findings. As Entergy’s experts explain, Dr. Sheppard relies on outdated documentation that has been superseded by a more recent U.S. Census Bureau evaluation. NYS and Dr. Sheppard ignore the more recent evaluation, which indicates that the census data on which Entergy relies slightly *overcounted* the U.S. population in 2000. So there is simply no undercount to challenge.

Second, Dr. Sheppard’s commuter argument fares no better. Entergy’s treatment of transient populations in its SAMA analysis is reasonable and consistent with NRC-approved guidance. That guidance—specifically, Nuclear Energy Institute (“NEI”) guidance document NEI 05-01, Rev. A, Severe Accident Mitigation Alternatives (SAMA) Analysis Guidance Document (Nov. 2005) (“NEI 05-01, Rev. A”) (NYS000287)—instructs that the transient population figures used for purposes of the SAMA analysis should be consistent with those included in the site emergency plan. That is, it should include transients located within the IPEC 10-mile emergency planning zone (“EPZ”). The relevant IPEC emergency planning document

and the IPEC SAMA analysis both define transient populations to include tourists (*i.e.*, recreational visitors and shoppers). As discussed below, the IPEC SAMA analysis actually includes estimated transient tourists *and* business travelers within the entire 50-mile radius region—not just within the required 10-mile EPZ.

Even assuming, *arguendo*, that commuters properly should be included in the transient population, Dr. Sheppard’s commuter population calculations are so flawed that they significantly overstate the net commuter population within the 50-mile SAMA analysis region. As explained below, Entergy’s experts have identified two major errors in Dr. Sheppard’s analysis: (1) its conceptualization of “commuter” is overbroad because it considers individuals *from all over the country* who work within the 50-mile region to be commuters into the region, rather than business travelers (for which Entergy already accounts); and (2) its failure to consider the countervailing effect of business travelers and commuters who travel or commute *out* of the 50-mile SAMA analysis region.

These flaws in Dr. Sheppard’s testimony are reason enough to dismiss NYS-16B. But beyond that, NYS fails to identify *any* material error in Entergy’s SAMA analysis. In the Commission’s words, “[t]he ultimate concern here is whether any additional SAMA should have been identified as potentially cost-beneficial, not whether further analysis may refine the details in the SAMA NEPA analysis.”⁶ In that same vein, the Commission very recently “stressed that ‘[u]nless it looks genuinely plausible that inclusion of an additional factor or use of other assumptions and models may change the cost-benefit conclusions for the SAMA candidates

⁶ *Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station)*, CLI-09-11, 69 NRC 529, 533 (2009).

evaluated, no purpose would be served to further refine the SAMA analysis.”⁷ Contrary to this Commission direction, Dr. Sheppard merely speculates (based on his own unreliable testimony) that “[a] lower population estimate *could* lead to an underestimation of the benefit obtained from implementing a SAMA, thus *potentially* excluding certain mitigation alternatives from full consideration.”⁸ To refute that potential, Entergy’s experts performed a MACCS2 sensitivity analysis in which they increased Entergy’s 2035 population estimate for census undercount and commuters as suggested by Dr. Sheppard. Those adjustments did not result in the identification of any additional cost-beneficial SAMAs. Thus, Dr. Sheppard’s larger 2035 population estimate—even if accepted and used in the SAMA analysis—would have no material effect on the SAMA analysis results.

NYS has thus failed to meet its burden here of adducing sufficient (or even reliable) evidence to support its claims, and of showing that the NRC “could evaluate [SAMAs] more meaningfully than it has already done.”⁹ In contrast, Entergy’s testimony demonstrates that the 2035 population estimate used in the IPEC SAMA analysis, which the Staff thoroughly evaluated and approved in the FSEIS, is reasonable and appropriate for a NEPA assessment.

II. PROCEDURAL HISTORY OF CONTENTION NYS-16B

On April 23, 2007, Entergy filed its application to renew the operating licenses for IP2 and IP3 for 20 years beyond their current expiration dates of September 28, 2013, and December 12, 2015, respectively. After a notice of opportunity for hearing was published in the

⁷ *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-05, 75 NRC ___, slip op. at 25 (Mar. 8, 2012) (quoting *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 317 (2010)).

⁸ Pre-Filed Written Testimony of Dr. Stephen Sheppard, Ph. D. Regarding Contention NYS-16/16A/16B (“NYS-16B”) at 3-4 (Dec. 16, 2011) (“Sheppard Testimony”) (NYS000207) (emphasis added).

⁹ *N.J. Dept. of Env'tl. Prot. v. NRC*, 561 F.3d 132, 144 (3d Cir. 2009) (citing *Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719, 744 n.31 (3d Cir.1989)).

Federal Register on August 1, 2007,¹⁰ NYS filed a petition to intervene on November 30, 2007, proposing a number of contentions, including NYS-16.¹¹

A. Original Contention

As initially submitted, NYS-16 alleged that:

Entergy's assertion, in its SAMA analysis for IP2 and IP3, that it "conservatively" estimated the population dose of radiation in a severe accident, is unsupported because Entergy's air dispersion model will not accurately predict the geographic dispersion of radionuclides released in a severe accident and Entergy's SAMA will not present an accurate estimate of the costs of human exposure.¹²

NYS proffered ten supporting bases that focused primarily on the accuracy of ATMOS, the air dispersion model in the MACCS2 code that Entergy used to simulate the atmospheric transport and dispersion of radionuclides released by a postulated severe accident at Indian Point.¹³ In a footnote, NYS asserted that Entergy's projection of the 2035 population residing within 50 miles of Indian Point underestimates the potential exposed population.¹⁴ Specifically, NYS challenged Entergy's projections for the population of New York County (*i.e.*, Manhattan). NYS cited published 2006 U.S. Census Bureau data and New York City Department of City Planning population data related to Manhattan and the other four New York City boroughs.¹⁵ In doing so, NYS made no mention of census undercount or unreliability of the 2000 U.S. Census data relied upon by Entergy in its SAMA analysis.

¹⁰ Notice of Acceptance for Docketing of the Application and Notice of Opportunity for Hearing Regarding Renewal of Facility Operating License Nos. DPR-26 and DPR-64 for an Additional 20-Year Period, 72 Fed. Reg. 42,134 (Aug. 1, 2007).

¹¹ See New York State Notice of Intention to Participate and Petition to Intervene (Nov. 30, 2007) ("NYS Petition"), available at ADAMS Accession No. ML073400187.

¹² *Id.* at 163.

¹³ See *id.* at 163-66.

¹⁴ See *id.* at 164 n.37.

¹⁵ See *id.* ("The United States Census estimates that in 2006 Manhattan's population was 1,611,581, over 40,000 more than Entergy asserts would be at risk 29 years later.").

On July 31, 2008, and as relevant here, the Board admitted NYS-16 “to the extent that it challenges whether the population projections used by Entergy are underestimated,” noting that population is one input to the MACCS2-based SAMA analysis.¹⁶

B. Amended Contention NYS-16A

In February 2009, NYS submitted NYS-16A in response to the NRC Staff’s December 2008 draft supplemental environmental impact statement (“DSEIS”).¹⁷ Like the original contention, NYS-16A focused on alleged deficiencies in the ATMOS model, and again relegated NYS’s challenge to Entergy’s population estimate to a footnote.¹⁸ With respect to the population issue, the amended contention offered no information that was materially new or different from the original contention. Notably, NYS referenced 2007 published U.S. Census Bureau data in support of its claim, again without any assertions that such data are flawed.¹⁹

On June 16, 2008, the Board admitted NYS-16A “to the degree that the Draft SEIS fails to address the issues raised by New York in NYS-16.”²⁰ The Board noted that NYS-16A alleges that “the population projections used by Entergy are underestimated,” but did not elaborate further on this aspect of the contention.²¹

¹⁶ *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 & 3), LBP-08-13, 68 NRC 43, 187 (2008).

¹⁷ See State of New York Contentions Concerning NRC Staff’s Draft Supplemental Environmental Impact Statement (Feb. 27, 2009) (“Amended Contention NYS-16A”), available at ADAMS Accession No. ML090690303.

¹⁸ See *id.* at 10 n.4.

¹⁹ *Id.* (The United State[s] Census estimates that in 2007 Manhattan’s population was 1,620,867, over 50,000 more than Entergy asserts would be at risk 29 years later).

²⁰ Licensing Board Order (Ruling on New York State’s New and Amended Contentions) at 6 (June 16, 2009) (unpublished).

²¹ *Id.*

C. Amended Contention NYS-16B

On March 11, 2010, NYS filed NYS-16B in response to Entergy's December 2009 revised SAMA analysis.²² Like its predecessors, NYS-16B challenged Entergy's use of the ATMOS air dispersion model. Again in a footnote, NYS-16B asserted that Entergy did not adequately account for tourists and daily commuters entering the 50-mile radius SAMA analysis region, particularly New York City.²³ NYS cited 2008 U.S. Census Bureau data and New York City tourism data in support of its amended contention, again, without any assertions that the data was flawed.²⁴

On June 30, 2010, the Board admitted NYS-16B in part and consolidated it with NYS-16/16A, inasmuch as it repeats the allegations in those contentions and "deals with the additional aspect of tourist and commuter populations."²⁵

As relevant here, the Board admitted NYS-16B "to the extent that it challenges whether the population projections used by Entergy are underestimated"²⁶ and "deals with the additional aspect of tourist and commuter populations."²⁷

D. NYS's Prefiled Testimony and Related Filings

On December 16, 2011, NYS submitted its Statement of Position on NYS-16B and supporting exhibits. In its Statement of Position, NYS indicated that it had "chosen not to pursue

²² See State of New York's New and Amended Contentions Concerning the December 2009 Severe Accident Mitigation Alternative Reanalysis (Mar. 11, 2010) ("Amended Contention NYS-16B"), available at ADAMS Accession No. ML100780366.

²³ *Id.* at 8 n.3.

²⁴ *Id.* at 9 ("The United States Census Bureau estimates that in 2008 Manhattan's population was 1,634,795, over 60,000 more than what the ER asserts would be at risk 29 years later.").

²⁵ *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 and 3), LBP-10-13, 71 NRC 673, 687 (2010).

²⁶ *Indian Point*, LBP-08-13, 68 NRC at 112.

²⁷ *Indian Point*, LBP-10-13, 71 NRC at 687

the part of Contention 16 challenging Entergy’s air dispersion model” at hearing.²⁸ NYS also introduced its new census undercount argument.

As noted, NYS’s testimony on this contention is sponsored by Dr. Stephen C. Sheppard, a professor of economics at Williams College in Williamstown, Massachusetts. Dr. Sheppard does not appear to have any experience in the nuclear field, using the MACCS or MACCS2 computer codes, or performing SAMA analyses.

NYS and Dr. Sheppard allege that the 2035 population estimate used by Entergy in its SAMA analysis (and approved by the NRC Staff in the FSEIS) is deficient in two respects. They first allege that the estimate, which is based on reported 2000 U.S. Census data, does not account for “census undercount,” which Dr. Sheppard defines as “the persistent undercount of portions of the population by the U.S. Census Bureau in the decennial census,” particularly “minorities and the poor.”²⁹ They further claim that Entergy’s population estimate does not include “those who live outside the 50 mile radius of IPEC, but commute to workplaces within IPEC’s 50 mile radius.”³⁰

In purporting to account for both census undercount and additional commuters, Dr. Sheppard estimates that the 2035 population within a 50-mile radius of IPEC will be 20,456,285 persons – approximately 1.2 million more persons than Entergy had estimated.³¹ Dr. Sheppard’s estimate is higher because it includes an additional 995,778 commuters and 231,632 persons purportedly associated with census undercount.³² Those additions amount to a total increase of

²⁸ NYS Statement of Position at 1 n.1 (NYS000206).

²⁹ Sheppard Test. at 10 (NYS000207).

³⁰ *Id.* at 6, 7, 10.

³¹ *Id.* at 16.

³² *Id.* at 13, 16.

6.38% of Entergy's 50-mile population estimate, 5.18% associated with commuters and 1.20% associated with census undercount.³³

Dr. Sheppard does not opine, and did not conduct any analysis to establish, that using his larger population estimate would result in identifying any additional cost-beneficial SAMAs beyond those already identified by Entergy. He made no attempt to revise the IP2 and IP3 SAMA analyses using his population estimate, or otherwise quantitatively assess the effect of using his proposed population estimate on the actual number of SAMAs identified as cost-beneficial in the SAMA analysis for each unit. Rather, he merely speculates that “[a] lower population estimate *could* lead to an underestimation of the benefit obtained from implementing a SAMA, thus *potentially* excluding certain mitigation alternatives from full consideration.”³⁴

E. The Parties' Joint Stipulation and Entergy's Motion in Limine

On January 23, 2012, NYS, Entergy, and the NRC Staff filed a Joint Stipulation with the Board memorializing NYS's decision not to pursue its original challenges to the MACCS2 air dispersion model.³⁵ In the Joint Stipulation, the parties also noted the following: “In NYS-16B, the State still asserts two significant errors in the population estimate: (1) failure to account for census undercount; and (2) failure to account for the commuter population present within the 50 mile zone of Indian Point.”³⁶ That statement was merely intended to reflect NYS's remaining *asserted* challenges – and not the parties' agreement on the scope of the contention for litigation at hearing.

³³ See *id.* at 16.

³⁴ *Id.* at 3-4 (emphasis added).

³⁵ See Joint Stipulation at 2 (“[T]he State has chosen not to pursue the claim that Entergy's air dispersion model is being used beyond its range of validity and does not accurately predict the geographic dispersion of radionuclides released in a severe accident, and, therefore, it is no longer at issue in this contention.”).

³⁶ *Id.*

On January 30, 2012, Entergy filed a Motion in Limine to exclude those portions of Dr. Sheppard's testimony and report and supporting exhibits related to NYS's new census undercount argument.³⁷ The NRC Staff supported Entergy's Motion in Limine,³⁸ and NYS opposed it.³⁹ As explained in Entergy's Motion in Limine, the Commission has held that intervenors are not permitted to change the scope of a contention as admitted by the Board. For example, the Commission has emphasized that the scope of a contention is limited to admitted issues of law and fact pled with particularity in the intervention petition, including its stated bases.⁴⁰ NYS itself acknowledged in its answer to Entergy's motion that "[a]t this stage, New York is prohibited from asserting new bases that are outside the contention's scope."⁴¹

The Board denied Entergy's Motion in Limine on March 6, 2012, finding that Boards "admit contentions, not bases" and that the census undercount issue was "within the scope of the Contention's reasonably inferred bounds."⁴² The Board also relied upon the parties' Joint Stipulation as an indication of the parties' agreement of not only what NYS-16B excluded, but also "what it included."⁴³

³⁷ Applicant's Motion in Limine to Exclude Portions of the Prefiled Testimony, Report, and Exhibits Filed by New York State and Dr. Stephen Sheppard in Support of Consolidated Contention NYS-16B (Jan. 30, 2012) ("Motion in Limine").

³⁸ NRC Staff's Answer to Applicant's Motion in Limine to Exclude Portions of the Prefiled Testimony, Report, and Exhibits Filed by New York State and Dr. Stephen Sheppard in Support of Consolidated Contention NYS-16B (Feb. 9, 2012).

³⁹ State of New York's Answer to Entergy's Motion in Limine to Exclude Portions of Pre-Filed Testimony and Exhibits for Consolidated Contention NYS-16B (Feb. 17, 2012) ("NYS Answer to Motion in Limine").

⁴⁰ *S. Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), CLI-10-5, 71 NRC 90, 100 (2010); *see also Pilgrim*, CLI-10-11, 71 NRC at 311 ("NRC adjudicatory proceedings would prove endless if parties were free . . . to introduce entirely new claims which they either originally opted not to make or which simply did not occur to them at the outset.") (*quoting La. Energy Servs., L.P.* (Nat'l Enrichment Facility), CLI-05-28, 62 NRC 721, 727-28 (2005)).

⁴¹ NYS Answer to Motion in Limine at 11.

⁴² *See* Licensing Board Order (Granting in Part and Denying in Part Applicant's Motions *in Limine*) at 6, 10 (Mar. 6, 2012) (unpublished) ("Ruling on Motions in Limine").

⁴³ *Id.* at 10.

Shortly after the Board denied Entergy's Motion in Limine, the Commission issued an order in the *Seabrook* license renewal proceeding reversing the admission of several contentions.⁴⁴ The *Seabrook* Board had similarly stated that it "admits contentions . . . and not their supporting bases."⁴⁵ Consistent with Entergy's arguments in its motion, the Commission rejected this statement, because "an admitted contention *is defined by its bases*."⁴⁶ The Commission also reminded Boards "of the need to specify each basis relied upon for admitting a contention."⁴⁷

While Entergy acknowledges the Board's ruling on its Motion in Limine, in view of the Commission's recent *Seabrook* decision, it respectfully submits that NYS's census undercount argument is a new basis not relied upon by NYS or the Board in admitting the contention. Further, Entergy respectfully disagrees with the Board's interpretation of the parties' mere recital of NYS's remaining assertions as an express statement of Entergy's and the NRC Staff's acquiescence that the census undercount argument was properly within the scope of the contention. Had the parties intended to make such a statement, Entergy would never have filed its Motion in Limine.⁴⁸ In any event, as summarized below, Entergy's experts address and refute NYS's census undercount argument in their testimony.

⁴⁴ *Seabrook*, CLI-12-05, slip op.

⁴⁵ *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), LBP-11-02, 73 NRC ___, slip op. at 31 (Feb. 15, 2011).

⁴⁶ *Seabrook*, CLI-12-05, slip op. at 11 n.50 (emphasis added).

⁴⁷ *Id.*

⁴⁸ Notably, in its answer to Entergy's Motion in Limine NYS did not point to the Joint Stipulation language as proof that the census undercount argument was within the scope of the contention. *See generally*, NYS Answer to Motion in Limine.

III. APPLICABLE LEGAL AND REGULATORY STANDARDS

A. Burden of Proof

At the hearing stage, an intervenor has the initial “burden of going forward”; *i.e.*, it must provide sufficient evidence to support the claims made in the admitted contention.⁴⁹ The mere admission of the contention does not satisfy that burden.⁵⁰ Moreover, an intervenor cannot meet its burden by relying on unsupported allegations and speculation.⁵¹ Rather, it must introduce sufficient evidence during the hearing phase to establish a *prima facie* case. If it does so, then the burden shifts to the applicant to provide sufficient evidence to rebut the intervenor’s contention.⁵² While the NRC Staff, not the applicant, has the burden of complying with NEPA,⁵³ the applicant also has the burden of proof in licensing proceedings if it becomes a proponent of the challenged portion of the Staff’s FSEIS.⁵⁴ Ultimately, a preponderance of the evidence must

⁴⁹ *Oyster Creek*, CLI-09-07, 69 NRC at 269 (quoting *Consumers Power Co.* (Midland Plant, Units 1 & 2), ALAB-123, 6 AEC 331, 345 (1973) (“The ultimate burden of proof on the question of whether the permit or license should be issued is, of course, upon the applicant. But where, as here, one of the other parties contends that, for a specific reason . . . the permit or license should be denied, that party has the *burden of going forward* with evidence to buttress that contention. Once he has introduced sufficient evidence to establish a *prima facie* case, the burden then shifts to the applicant who, as part of his overall burden of proof, must provide a sufficient rebuttal to satisfy the Board that it should reject the contention as a basis for denial of the permit or license.”)); see also *Vt. Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519, 554 (1978) (upholding this threshold test for intervenor participation in licensing proceedings); *Phila. Elec. Co.* (Limerick Generating Station, Units 1 & 2), ALAB-262, 1 NRC 163, 191 (1975) (holding that the intervenors had the burden of introducing evidence to demonstrate that the basis for their contention was more than theoretical).

⁵⁰ See *Oyster Creek*, CLI-09-07, 69 NRC at 268-70.

⁵¹ See *id.*; see also *Phila. Elec. Co.* (Limerick Generating Station, Units 1 & 2), ALAB-857, 25 NRC 7, 13 (1987) (stating that an intervenor may not merely assert a need for more current information without having raised any questions concerning the accuracy of the applicant’s submitted facts).

⁵² See, e.g., 10 C.F.R. § 2.325; *La. Power & Light Co.* (Waterford Steam Electric Station, Unit 3), ALAB-732, 17 NRC 1076, 1093 (1983) (citing *Midland*, ALAB-123, 6 AEC at 345).

⁵³ See, e.g., *Duke Power Co.* (Catawba Nuclear Station, Units 1 & 2), CLI-83-19, 17 NRC 1041, 1049 (1983).

⁵⁴ *La. Energy Servs., L.P.* (Claiborne Enrichment Ctr.), LBP-96-25, 44 NRC 331, 338-39 (1996) (citing *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 & 2), ALAB-471, 7 NRC 477, 489 n.8 (1978), *rev’d on other grounds*, CLI-97-15, 46 NRC 294 (1997)).

support the applicant's position.⁵⁵

B. Controlling NEPA Principles

SAMA analysis is a NEPA-derived requirement, and consequently, the consideration of mitigation alternatives is governed by NEPA's "rule of reason."⁵⁶ NEPA requires a "reasonably complete discussion of possible mitigation measures,"⁵⁷ but gives federal agencies discretion as to how to meet this mandate.⁵⁸ NEPA does not, for example, require agencies to use "the best scientific methodology."⁵⁹ Rather, it allows agencies "to select their own methodology as long as that methodology is reasonable."⁶⁰

In the SAMA context, "mitigation (and the SAMA issue is one of mitigation) need only be discussed in 'sufficient detail to ensure that environmental consequences [of the proposed project] have been fairly evaluated.'"⁶¹ SAMA analyses must be "bounded by some notion of feasibility."⁶² As the Commission has noted:

NRC adjudicatory hearings are not "EIS editing sessions." *The ultimate concern here is whether any additional SAMA should have*

⁵⁵ See *Pac. Gas & Elec. Co.* (Diablo Canyon Nuclear Power Plant, Units 1 & 2), ALAB-763, 19 NRC 571, 577 (1984).

⁵⁶ *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 & 2; Catawba Nuclear Station, Units 1 & 2), CLI-02-17, 56 NRC 1, 12 (2002) (citing *Vt. Yankee*, 435 U.S. at 551; *Citizens Against Burlington v. Busey*, 938 F.2d 190, 195 (D.C. Cir. 1991)).

⁵⁷ *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352 (1989); see also *Laguna Greenbelt, Inc. v. U.S. Dep't of Transp.*, 42 F.3d 517, 528 (9th Cir. 1994) ("NEPA does not require a fully developed plan that will mitigate all environmental harm before an agency can act; NEPA requires only that mitigation be discussed in sufficient detail to ensure that environmental consequences have been fully evaluated.").

⁵⁸ *Sierra Club v. U.S. Dep't of Transp.*, 753 F.2d 120, 128 (D.C. Cir. 1985) (citing *Ethyl Corp. v. EPA*, 541 F.2d 1, 12 & n. 16 (D.C. Cir.), cert. denied, 426 U.S. 941 (1976)).

⁵⁹ *Pilgrim*, CLI-10-11, 71 NRC at 315 (citing *Hells Canyon Alliance v. U.S. Forest Serv.*, 227 F.3d 1170, 1185 (9th Cir. 2000)).

⁶⁰ *Id.* (quoting *Town of Winthrop v. FAA*, 535 F.3d 1, 13 (1st Cir. 2008)).

⁶¹ *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 & 2; Catawba Nuclear Station, Units 1 & 2), CLI-03-17, 58 NRC 419, 431(2003) (quoting *Methow*, 490 U.S. at 352).

⁶² *McGuire*, CLI-02-17, 56 NRC at 12 (quoting *Vt. Yankee*, 435 U.S. at 551 (applying NEPA's rule of reason and rejecting proposed SAMA contention for failure to provide "any notion of cost"))).

*been identified as potentially cost-beneficial, not whether further analysis may refine the details in the SAMA NEPA analysis.*⁶³

The Commission recently reiterated this point just weeks ago in *Seabrook*.⁶⁴

Where a petitioner challenges an applicant's SAMA analysis methodology or assumptions, the petitioner must provide "adequate support" showing that it is "genuinely plausible that inclusion of an additional factor or use of other assumptions or models may change the *cost-benefit conclusions* for the SAMA candidates evaluated."⁶⁵ This requires a "reasoned evaluation" of whether and to what extent the petitioner's allegations credibly could or would alter the applicant's SAMA analysis conclusions on which SAMAs are cost-beneficial to implement.⁶⁶ Earlier this week, the Commission emphasized that the "proper question is not whether there are plausible alternative choices for use in the analysis, but whether the analysis that was done is reasonable under NEPA," and to contest an application, "a petitioner must point with support to an asserted deficiency that renders the SAMA analysis unreasonable under NEPA."⁶⁷

⁶³ *Pilgrim*, CLI-09-11, 69 NRC at 533 (citation omitted).

⁶⁴ *See Seabrook*, CLI-12-05, slip op.

⁶⁵ *Pilgrim*, CLI-10-11, 71 NRC at 317.

⁶⁶ *Entergy Nuclear Generation Co. (Pilgrim Power Station)*, CLI-10-22, 72 NRC 202, 208-09 (2010).

⁶⁷ *FirstEnergy Nuclear Operating Company (Davis-Besse Nuclear Power Station, Unit 1)*, CLI-12-08, 75 NRC ___, slip op. at 17-18 (Mar. 27, 2012) (quoting *Seabrook*, CLI-12-5, slip op. at 28-29).

IV. ARGUMENT

A. Entergy's Witnesses

Entergy's testimony on NYS-16B is provided by the following witnesses:

1. Ms. Lori Ann Potts

Ms. Potts is a senior consulting engineer to Entergy in the areas of SAMA analysis and fire probabilistic risk assessment ("PRA") in Russellville, Arkansas.⁶⁸ As indicated in her testimony,⁶⁹ Ms. Potts has over 30 years of experience as a technical professional in the nuclear industry in the areas of safety analysis, PRA, deterministic and probabilistic accident and consequence analysis, materials aging management, reactor engineering, and systems engineering. Ms. Potts' experience includes performing PRA and severe accident analysis of reactor, emergency system, and containment phenomena under accident conditions. She has participated directly in the SAMA analyses for eight nuclear plants, including the SAMA analysis for IP2 and IP3 and has peer reviewed the SAMA analyses for three additional nuclear plants. Ms. Potts is also one of the authors of NEI 05-01, Rev. A, the industry guidance document for performing SAMA analyses. Ms. Potts has a Bachelor's of Science ("B.S.") degree in Nuclear Engineering from The Pennsylvania State University.

2. Dr. Kevin R. O'Kula

Dr. O'Kula is an Advisory Engineer with URS Safety Management Solutions LLC in Aiken, South Carolina. As indicated in his testimony,⁷⁰ Dr. O'Kula has over 29 years of experience as a technical professional and manager in the areas of safety analysis methods and

⁶⁸ PRA is sometimes referred to as probabilistic safety assessment ("PSA"). The terms PRA and PSA generally are used interchangeably within the nuclear industry.

⁶⁹ See Entergy Test. at A2-4.

⁷⁰ See *id.* at A6-9.

guidance development, computer code validation and verification, PRA, deterministic and probabilistic accident and consequence analysis applications for reactor and non-reactor nuclear facilities, source term evaluation, risk management, software quality assurance, and shielding. In addition, he has over 20 years of experience using, applying, and providing training on the MELCOR Accident Consequence Code System (“MACCS”) and the MACCS2 (a later version of MACCS) computer codes, which are used to evaluate the potential impacts of severe accidents at nuclear power plants on the surrounding public. Dr. O’Kula obtained his B.S. in Applied and Engineering Physics from Cornell University in 1975, and his Master’s of Science (“M.S.”) degree and Ph.D. in Nuclear Engineering from the University of Wisconsin in 1977 and 1984, respectively.

3. Mr. Grant A. Teagarden

Mr. Teagarden is the Manager for Consequence Analysis for ERIN Engineering & Research, Inc. in Campbell, California. As indicated in his testimony,⁷¹ Mr. Teagarden has 14 years of experience in the nuclear field, including 10 years as a manager and technical professional in the areas of PRA, source term analysis, consequence analysis, and nuclear power plant security risk assessment. He is also a member of the American Nuclear Society (“ANS”) and Vice Chair of the writing committee for ANSI/ANS-58.25, *Standard for Radiological Accident Offsite Consequence Analysis (Level 3 PRA) to Support Nuclear Installation Applications*. Mr. Teagarden has substantial experience using MACCS2 and developing MACCS2 models for commercial nuclear power plants in the United States. He has developed or managed the development of MACCS2 models in support of SAMA analyses for ten nuclear power plant sites. Mr. Teagarden obtained his B.S. degree in Mechanical Engineering from

⁷¹ See *id.* at A11-13.

University of Miami in 1990 and completed the Bettis Reactor Engineering School at the Bettis Atomic Power Laboratory as part of his training in the U.S. Navy nuclear program.

4. Mr. Jerry L. Riggs

Mr. Riggs is a Geographic Information System (“GIS”) Specialist for Enercon Services, Inc. As indicated in his testimony,⁷² Mr. Riggs has over six years of experience as a GIS Specialist at Enercon. In that capacity, he has assisted in the development of combined license applications, license renewal applications, research and development of GIS operating procedures, demographic analysis, environmental justice analysis, socioeconomic impact analysis, mapping and spatial analysis, GPS data mapping, and project coordination. As part of those efforts, Mr. Riggs has conducted extensive literature reviews on various socioeconomic subjects, including environmental justice, and has performed demographic analyses for a number of NRC license applications. Based on his experience, Mr. Riggs is very familiar with U.S. Census Bureau data and related literature.

B. Entergy’s Evidence

Entergy’s experts will testify about Entergy’s development of the year 2035 population projection used in the IPEC SAMA analysis, and why that projection is reasonable and appropriate under NEPA and in view of industry and NRC guidance. As summarized below, Entergy’s experts will also explain why NYS’s objections to that projection are meritless.

1. Entergy reasonably and appropriately relied upon published 2000 U.S. Census Bureau data in preparing its population projection.

Entergy reasonably based its 2035 population projection on published 2000 U.S. Census population data.⁷³ The U.S. Census Bureau, an agency within, and under the jurisdiction of, the

⁷² See *id.* at A15-17.

⁷³ Entergy Test. at A64.

Department of Commerce, is responsible for collecting and assessing the adequacy of census and other demographic data.⁷⁴ Courts have recognized that census data is not only “*presumptively correct* and . . . must be rebutted with clear and convincing evidence,”⁷⁵ but also an “appropriate and frequent” subject of judicial notice.⁷⁶

Not surprisingly, federal, state, and local governments routinely rely upon published census data for a variety of purposes—*e.g.*, government funds allocation, government program administration, and government planning, including emergency planning, zoning, infrastructure planning, economic analysis, and housing analysis.⁷⁷ As particularly relevant here, federal and state agencies routinely rely upon published census data in performing assessments to comply with NEPA and other legal and regulatory obligations.⁷⁸ Accordingly, Entergy’s use of published U.S. Census data in preparing its population projection was entirely reasonable and appropriate.

Dr. Sheppard’s contrary argument is based solely on his assertion that the 2000 Census “undercounted” the population.⁷⁹ But the documentation that Dr. Sheppard relies upon to support that assertion has been superseded by more recent Census Bureau documentation that his testimony and report ignore, without explanation. For instance, Dr. Sheppard relies principally on a September 2001 U.S. Census Monitoring Board Presidential Members report to Congress,

⁷⁴ Specifically, through the Census Act, 13 U.S.C. § 141 *et seq.*, Congress has delegated to the Secretary of the Department of Commerce the responsibility to take “a decennial census of the population . . . in such form and content as he may determine.” 13 U.S.C. § 141(a) (2006).

⁷⁵ *See, e.g., Fairley v. Hattiesburg*, 584 F.3d 660, 674 (5th Cir. 2009) (holding that the district court, in a redistricting and apportionment case under the Voting Rights Act, properly relied on Census data) (emphasis added).

⁷⁶ *Hollinger v. Home State Mut. Ins. Co.*, 654 F.3d 564, 571-72 (5th Cir. 2011) (taking judicial notice, based on U.S. Census Bureau statistics, regarding the relocation rates of Americans out of Texas) (citing cases).

⁷⁷ Entergy Test. at A79.

⁷⁸ *Id.*

⁷⁹ Sheppard Test. at 12-13.

which in turn relies in part on data from the Census Bureau’s March 2001 Accuracy and Coverage Evaluation (“A.C.E.”).⁸⁰ The data from the March 2001 A.C.E. estimated a 1.18 percent net undercount for Census 2000.⁸¹

Subsequent Census Bureau publications, however, identified significant errors in the March 2001 A.C.E. results, and concluded that the 2000 Census actually resulted in a population *overcount*—not an undercount as Dr. Sheppard asserts. Specifically, in 2003, the Census Bureau concluded that “[t]he March 2001 A.C.E. estimates of Census 2000 coverage were determined to be *unacceptable* because A.C.E. failed to measure a significant number of erroneous census enumerations.”⁸² Research efforts undertaken to correct those errors, referred to as A.C.E. Revision II, resulted in estimates that were “*substantially different* from those of March 2001, changing the estimated net coverage of the total household population *from a net undercount of 1.18 percent to a net overcount of 0.49 percent.*”⁸³ Dr. Sheppard’s assertion—and NYS’s argument based upon it—thus lacks any factual basis.

2. Entergy included appropriate transient populations for the entire 50-mile region within the SAMA analysis, including tourists and business travelers.
 - a. Entergy characterized the relevant transient population consistent with industry guidance.

Consistent with the relevant industry guidance on SAMA analyses, Entergy’s population projection for the 50-mile region surrounding IPEC includes both permanent residents and transients.⁸⁴ Transients include business travelers and tourists who enter the 50-mile IPEC

⁸⁰ See Entergy Test. at A70; Sheppard Report at 5 n.7.

⁸¹ Entergy Test. at A72.

⁸² *Id.* at A76.

⁸³ *Id.*

⁸⁴ *Id.* at A55-56.

region.⁸⁵ The NRC-endorsed industry guidance document for performing SAMA analyses, NEI 05-01, Rev. A, recommends the following:

Provide a predicted population within a 50-mile radius of the site. The predicted population distribution may be obtained by extrapolating publicly available census data. *Transient population included in the site emergency plan should be added to the census data before extrapolation.*⁸⁶

IPEC's site emergency plan incorporates population assumptions from the Indian Point Energy Center Development of Evacuation Time Estimates, which defines "transients" as shoppers and recreational visitors who enter the 10-mile EPZ surrounding IPEC who leave on the same day or stay overnight in hotels or camping facilities.⁸⁷ Accordingly, Entergy's inclusion of business travelers and tourists within the transient population is consistent with NEI 05-01, Rev. A. In fact, by including business travelers, Entergy actually assumed a *larger* transient population than specified in NEI 05-01, Rev. A. Further, because Entergy included transients within the *entire 50-mile region* (a much larger area than the 10-mile EPZ governed by the site emergency plan), its population assumptions are significantly larger, and therefore more conservative, than NEI 05-01, Rev. A would require.

- b. Even if inclusion of commuters were warranted or recommended, Dr. Sheppard has not provided a reasonable estimate of the daily commuter population.

Dr. Sheppard's methods for estimating the commuter population in the 50-mile region surrounding IPEC are flawed in two major respects, which caused him to significantly overstate the commuter population. First, Dr. Sheppard's analysis classifies and counts each person from outside the 50-mile region who works within the region as a commuter, regardless of the

⁸⁵ *Id.* at A55.

⁸⁶ *Id.* at A56.

⁸⁷ *Id.*

person's residence county.⁸⁸ Dr. Sheppard relies on data from the U.S. Census Bureau, *County-to-County Worker Flow Files*, which list the work county for each of the residents of *every county in the country*.⁸⁹ Thus, for example, Dr. Sheppard's analysis counts 16 residents of Honolulu County, Hawaii, as commuters into Essex County, New Jersey; 19 residents of Anchorage, Alaska, as commuters into Queens County, New York; and 53 residents of San Diego County, California, as commuters into Fairfield County, Connecticut.⁹⁰ It is simply not reasonable to assume that people from more than 3,000 miles away commute into the region on a daily basis.⁹¹ Rather, such individuals—who would need to secure overnight lodging when visiting the region—should be considered business travelers. As such, they have already been included in the transient population values used by Entergy in the SAMA analysis.⁹²

Second, Dr. Sheppard fails to consider commuters *out* of the 50-mile region surrounding IPEC.⁹³ The U.S. Census Bureau's *County-to-County Worker Flow Files* also include data for commuters and business travelers out of the 50-mile region, but Dr. Sheppard does not consider such data in either his testimony or report.⁹⁴ This is a significant oversight.

Entergy's experts Ms. Potts and Mr. Riggs performed an analysis that corrected the above errors in Dr. Sheppard's analysis to determine what the projected commuter population should have been had Dr. Sheppard performed the analysis correctly. The revised analysis considered only residents of Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York,

⁸⁸ *Id.* at A83.

⁸⁹ *Id.*

⁹⁰ *Id.*

⁹¹ *Id.*

⁹² *Id.*

⁹³ *Id.*

⁹⁴ *Id.*

Pennsylvania, Rhode Island, and Vermont with work locations in the 50-mile SAMA analysis region as commuters into the region.⁹⁵ It also considered residents in the 50-mile region who work outside the 50-mile region and thus are commuters out of the region.⁹⁶ Using these reasonable assumptions, Entergy’s experts projected a net 2035 commuter population in the 50-mile region of 110,663 commuters, in contrast to the 995,778 commuters erroneously estimated by Dr. Sheppard—a commuter-related population increase population of only 0.58 percent (110,663 net commuters / 19,228,712 total population), in contrast to Dr. Sheppard’s posited commuter-related population increase of 5.18 percent.⁹⁷ Entergy’s commuter analysis results in a revised total population estimate of 19,571,172—which also includes, for the sake of argument, the 231,632 people Dr. Sheppard claims were undercounted. Assuming that it is appropriate to include commuters, the 19,571,172 population estimate is a negligible 1.78 percent larger than Entergy’s original projection of 19,228,712 persons.⁹⁸

3. Even assuming that the population projection should be adjusted for census undercount and commuters as Dr. Sheppard claims, Entergy’s experts determined that increasing the population projection would have no material impact on the IPEC SAMA analysis.

Entergy’s experts Dr. O’Kula and Mr. Teagarden conducted an analysis to evaluate the potential impacts of the population increase posited by Dr. Sheppard *without* correcting for the errors in Dr. Sheppard’s commuter population estimate discussed above.⁹⁹ That analysis used Dr. Sheppard’s census undercount value (231,632) and adjusted his commuter population value to account for the amount of time commuters would be expected to be within the 50-mile SAMA

⁹⁵ *Id.* at A84.

⁹⁶ *Id.*

⁹⁷ *Id.*

⁹⁸ *Id.*

⁹⁹ Specifically, they performed a MACCS2 sensitivity case for the IP2 SAMA analysis. *Id.* at A87.

analysis region (497,889, or 50 percent of 995,778)—adding a total of 729,521 persons to the 50-mile radial population.¹⁰⁰ Those additions, however, resulted in only very small increases to the key metrics in a SAMA analysis—the population dose risk and the offsite economic cost risk. In fact, the resulting increases had no material impact on Entergy’s SAMA analysis because they did not result in the identification of any additional potentially cost-beneficial SAMAs.¹⁰¹

C. NYS Has Not Met Its Evidentiary Burden

1. Entergy’s population projections are reasonable and accurate.

As demonstrated above, NYS has not carried its burden of showing that “Entergy’s population estimates are inaccurate.”¹⁰² Dr. Sheppard’s census undercount and commuter arguments suffer from substantial deficiencies, and Entergy has proffered more than sufficient evidence to rebut any claim that it underestimated the projected population within the 50-mile SAMA analysis region.

2. The NRC independently reviewed Entergy’s population projections and properly concluded that they are reasonable.

NYS has also failed to prove that, by accepting Entergy’s population estimate, the NRC has presented “an inaccurate report of the environmental consequences of relicensing the Indian Point facility” and failed to take a “hard look” at environmental impacts.¹⁰³ As discussed above, NEPA affords the NRC the discretion to determine how to meet its statutory obligations and to select its own methodology for discharging its responsibilities “so long as that methodology is reasonable.”¹⁰⁴ The NRC Staff performed an independent review of Entergy’s methodology and

¹⁰⁰ *Id.*

¹⁰¹ *Id.* at A87-88.

¹⁰² NYS Statement of Position at 14 (NYS000206).

¹⁰³ *Id.* at 21-23.

¹⁰⁴ *Pilgrim*, CLI-10-11, 71 NRC at 316; *see also Sierra Club*, 753 F.2d at 128.

assumptions, the results of which are summarized in Appendix G of the IPEC FSEIS (which discusses Entergy’s population projections at length). The Staff fully concurred in both Entergy’s methodology and its basis for adjusting for transients.¹⁰⁵

The NRC also retained the Sandia National Laboratory (“Sandia”) to perform another independent assessment of the population data within a 50-mile radius of IPEC using the SECPOP2000 computer program.¹⁰⁶ Sandia also determined that Entergy’s 2035 projected population growth was “reasonable.”¹⁰⁷ Based on these supplemental analyses, the Staff and Sandia confirmed that “Entergy’s population data and projected population growth analysis provide reasonable (and slightly conservative) population values for its SAMA analysis.”¹⁰⁸

NYS’s ancillary argument that the “Staff’s failure to consider the impact of commuters is contrary to NRC guidance” rings hollow.¹⁰⁹ NYS references NRC Regulatory Guide 1.70, “Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants (LWR Edition)” (Nov. 1978) (NYS000222). That document suggests that, if a nuclear power plant “is located in an area where significant population variations due to transient land use [recreational or industrial] are expected,” applicants should provide information to indicate peak seasonal and daily populations.¹¹⁰ Recognizing that this guidance is not binding on Entergy,¹¹¹ NYS instead asserts that the above-quoted statement constitutes an admission by the Staff under Federal Rule

¹⁰⁵ See Entergy Test. at A68.

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

¹⁰⁸ *Id.*

¹⁰⁹ NYS Statement of Position at 20 (NYS000206).

¹¹⁰ *Id.*; Regulatory Guide 1.70, “Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants (LWR Edition),” Rev. 3, at 2-4 (Nov. 1978) (NYS000222).

¹¹¹ See, e.g., *New Jersey v. NRC*, 526 F.3d 98, 102 (3d Cir. 2008); *Areva Enrichment Servs., LLC* (Eagle Rock Enrichment Facility), CLI-11-04, slip. op. at 10 n. 35 (July 12, 2011).

of Evidence 801(d)(2), and thus warrants rejection of any contrary position now taken by Staff.¹¹² However, the guidance cited by NYS applies to licensee safety analysis reports and is not germane to Entergy's NEPA-based SAMA analysis. As discussed above, NEI 05-01, Rev. A is the NRC-endorsed industry guidance document for preparation of SAMA analyses, and Entergy's population projection is consistent with that guidance. By reasonably including business travelers and tourists within the transient population, Entergy's population projection fully meets the intent of NEPA.

V. CONCLUSION

For the foregoing reasons, Entergy respectfully requests that the Board resolve Consolidated Contention NYS-16B in favor of Entergy and the NRC Staff.

¹¹² NYS Position Statement at 21.

Respectfully submitted,

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Dated in Washington, D.C.
this 28th day of March 2012

**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.)	
)	March 28, 2012
(Indian Point Nuclear Generating Units 2 and 3))	
)	

CERTIFICATE OF SERVICE

I certify that, on March 28, 2012, a copy of “Entergy’s Statement of Position Regarding Consolidated Contention NYS-16B,” “Testimony of Entergy Witnesses Lori Potts, Kevin O’Kula, Grant Teagarden, and Jerry Riggs on Consolidated Contention NYS-16B (Severe Accident Mitigation Alternatives Analysis,” and associated exhibits were served electronically with the Electronic Information Exchange on the following recipients:

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