UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:	)	Docket Nos. 50-352-LR 50-353-LR
EXELON GENERATION COMPANY, LLC	)	
(Limerick Generating Station, Units 1 and 2)	)	December 20, 2011

EXELON'S ANSWER OPPOSING NRDC'S PETITION TO INTERVENE

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I. INTRODUCTION AND SUMMARY

In accordance with 10 C.F.R. § 2.309(h), Exelon Generation Company, LLC ("Exelon") submits this Answer opposing the "Petition to Intervene and Notice of Intention to Participate" ("Petition"), filed by the Natural Resources Defense Council ("NRDC") on November 22, 2011.[1] The Petition proffers four contentions challenging "Exelon's Environmental Report – Operating License Renewal Stage" ("ER"), and alleging violations of the National Environmental Policy Act ("NEPA"), as amended,[2] as well as NRC regulations set forth in 10 C.F.R Part 51.

To be granted a hearing in this proceeding, NRDC must demonstrate standing and submit at least one admissible contention.[3] Although Exelon does not contest NRDC's standing, the Board should deny the Petition in its entirety because NRDC has failed to proffer the requisite admissible contention.[4] Namely, as fully demonstrated below, the first three contentions, Contentions 1-E through 3-E, impermissibly challenge 10 C.F.R. § 51.53(c)(3)(ii)(L), which does not require license renewal applicants to prepare a Severe Accident Mitigation Alternatives ("SAMA") analysis if the NRC Staff previously considered SAMAs in conjunction with initial plant licensing. Because a petitioner cannot challenge a regulation in an adjudicatory proceeding such as this, absent a waiver from the Commission, Contentions 1-E through 3-E are unequivocally outside the scope of this proceeding and must be rejected for that reason alone—as well as others delineated herein.

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1 By Order of the U.S. Nuclear Regulatory Commission ("NRC") dated October 17, 2011, the time for Exelon and the NRC Staff to respond to a Petition to Intervene filed by NRDC was extended to December 22, 2011.

2 *See* 42 U.S.C. § 4321 *et seq.* (2006).

3 *See* 10 C.F.R. § 2.309(a).

4 *See id.* § 2.309(f)(1).

The fourth environmental contention, Contention 4-E, challenges Exelon's treatment of the "No-Action" alternative, purportedly because of an alleged failure to consider renewable energy resources and demand-side management. This contention is not admissible because the ER contains the very information that NRDC alleges is lacking. Furthermore, as explained below, proposed Contention 4-E is inadmissible for other reasons that require it be rejected in its entirety.

II. PROCEDURAL BACKGROUND

Limerick Generating Station, Units 1 and 2 ("Limerick") is located in Pennsylvania, approximately 35 miles upriver from Philadelphia, and generates 2,340 MWe of baseload electrical power.[5] As described in detail below, Limerick is one of three nuclear reactor facilities – along with Comanche Peak and Watts Bar – for which the NRC Staff previously considered SAMAs in the Environmental Impact Statement ("EIS") (or related supplement) prepared in connection with initial plant licensing.[6]

On June 22, 2011, Exelon submitted its License Renewal Application ("LRA") to the NRC, requesting the renewal of the Limerick operating licenses for an additional twenty years (*i.e.*, until midnight on October 26, 2044 for Unit 1, and midnight on June 22, 2049 for Unit 2).[7] The NRC accepted the Application for docketing and published a Hearing Notice in the *Federal*

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[5] Applicant's Environmental Report – Operating License Renewal Stage, Limerick Generating Station, Units 1 and 2, at 2-3, 7-4 to 7-5, 7-10, 7-17 (June 2011) ("ER"), *available at* http://www.nrc.gov/reactors/operating/licensing/renewal/applications/limerick/lgs-er-web.pdf.

[6] *See* NUREG-1437, Generic Environmental Impact Statement for License Renewal of Nuclear Plants § 5.4 (1996) ("GEIS"); *see also* NUREG-0974 Supp., Final Environmental Statement Related to the Operation of Limerick Generating Station, Units 1 and 2, at v-vii, ix (Aug. 1989) ("Limerick EIS") (Aug. 1989), *available at* ADAMS Accession No. ML11221A204 ("Limerick EIS").

[7] *See* Notice of Acceptance for Docketing of the Application and Notice of Opportunity for Hearing Regarding Renewal of Facility Operating License Nos. NPF-39 and NPF-85 for an Additional 20-Year Period; Exelon Generation Co., LLC, Limerick Generating Station, 76 Fed. Reg. 52,992, 52,992 (Aug. 24, 2011) ("Hearing Notice").

Register on August 24, 2011.[8] The Hearing Notice stated that any person whose interest may be affected by this proceeding, and who wishes to participate as a party, must file a petition for leave to intervene within 60 days of the Hearing Notice (*i.e.*, by October 24, 2011) in accordance with 10 C.F.R. § 2.309.[9] On September 22, 2011, NRDC requested an extension of time for filing a Petition to Intervene until November 22, 2011.[10] By Order dated October 17, 2011, the Secretary for the Commission granted this request.[11] On November 22, 2011, NRDC timely filed the Petition.

III. STANDING

NRDC asserts standing in a representational capacity on behalf of three of its members.[12] Exelon does not contest its standing in this proceeding.

IV. OVERVIEW OF NRC CONTENTION ADMISSIBILITY STANDARDS

As explained above, to intervene in an NRC licensing proceeding, NRDC must propose at least one admissible contention.[13] NRC regulations at 10 C.F.R. § 2.309(f)(1) specify that a hearing request "must set forth with particularity the contentions sought to be raised." In addition, the same regulation further specifies that each contention must:

(1) provide a specific statement of the legal or factual issue sought to be raised;

(2) provide a brief explanation of the basis for the contention;

(3) demonstrate that the issue raised is within the scope of the proceeding;

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8 *See id*. at 52,992-94.

9 *Id*. at 52,993.

10 NRDC Request for Extension of Time to Request a Hearing and Petition for Leave to Intervene in the NRC's Notice of Opportunity for Hearing Regarding Renewal of Facility Operating License Nos. NPF-39 and NPF-85 Limerick Station for Additional 20-Year (Sept. 22, 2011), available at ADAMS Accession No. ML11266A083.

11 Order (Oct. 17, 2011) (unpublished) (granting NRDC an extension of 30 days to file a petition to intervene), *available at* ADAMS Accession No. ML11290A233.

12 *See* Petition at 4-12; Declarations of Mr. Charles W. Elliott (Nov. 17, 2011), Ms. Suzanne Day (Nov. 18, 2011), and Mr. William White (Nov. 17, 2011), available at ADAMS Accession No. ML11326A32.

13 10 C.F.R. § 2.309(a).

(4) demonstrate that the issue raised is material to the findings the NRC must make to support the action that is involved in the proceeding;

(5) provide a concise statement of the alleged facts or expert opinions, including references to specific sources and documents that support the petitioner's position and upon which the petitioner intends to rely; and

(6) provide sufficient information to show that a genuine dispute exists with regard to a material issue of law or fact.[14]

The purpose of these six criteria is to "focus litigation on concrete issues and result in a clearer and more focused record for decision."[15] The Atomic Safety and Licensing Board ("Board") must deny a petition to intervene and request for hearing from a petitioner who has standing, but has not proffered at least one admissible contention.[16]

The NRC's contention admissibility rules are "strict by design."[17] The rules were further "toughened . . . in 1989 because in prior years 'licensing boards had admitted and litigated numerous contentions that appeared to be based on little more than speculation.'"[18] In 2004, the NRC implemented additional amendments to the adjudicatory process, continuing its requirement that only "well-supported, specific contentions . . . [be submitted] in all proceedings."[19] Thus, failure to comply with any one of the six admissibility criteria is grounds

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[14] S*ee* 10 C.F.R. § 2.309(f)(1)(i)-(vi). The seventh contention admissibility requirement—10 C.F.R. § 2.309(f)(1)(vii)—is only applicable in proceedings arising under 10 C.F.R. § 52.103(b) and, therefore, has no bearing on the admissibility of NRDC's proposed contentions in this proceeding.

[15] Changes to Adjudicatory Process, 69 Fed. Reg. 2182, 2202 (Jan. 14, 2004) (Final Rule).

[16] *Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 & 4), CLI-01-17, 54 NRC 3, 26 (2001) (finding that a licensing board has no discretion to allow intervention where a petitioner has not proffered at least one valid contention for litigation).

[17] *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 & 3), CLI-01-24, 54 NRC 349, 358 (2001), *petition for recons.. denied*, CLI-02-1, 55 NRC 1 (2002).

[18] *Id. (quoting Duke Energy Corp* .(Oconee Nuclear Station, Units 1, 2, & 3), CLI-99-11, 49 NRC 328, 334 (1999)).

[19] Changes to Adjudicatory Process, 69 Fed. Reg. at 2188.

for rejecting a proposed contention.[20] The legal principles governing the application of each of the six pertinent criteria in 10 C.F.R. § 2.309(f)(1) are discussed briefly below.

A. Petitioner Must Specifically State the Issue of Law or Fact to Be Raised

A petitioner must "articulate at the outset the specific issues [it] wish[es] to litigate as a prerequisite to gaining formal admission as [a party]."[21] Namely, an "admissible contention must explain, with specificity, particular safety or legal reasons requiring rejection of the contested [application]."[22] The contention rules "bar contentions where petitioners have only 'what amounts to generalized suspicions, hoping to substantiate them later.'"[23]

B. Petitioner Must Briefly Explain the Basis for the Contention

A petitioner must provide "a brief explanation of the basis for the contention."[24] This includes "sufficient foundation" to "warrant further exploration."[25] The petitioner's explanation serves to define the scope of a contention, as "[t]he reach of a contention necessarily hinges upon its terms coupled with its stated bases."[26] As the Commission has observed, "[i]t is the responsibility of the Petitioner to provide the necessary information to satisfy the basis requirement for the admission of its contentions and demonstrate that a genuine dispute exists

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[20] *See id*. at 2221; *see also Private Fuel Storage, L.L.C.* (Indep. Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325 (1999).

[21] *Oconee*, CLI-99-11, 49 NRC at 338; *see also* 10 C.F.R. § 2.309(f)(1)(i).

[22] *Millstone,* CLI-01-24, 54 NRC at 359-60.

[23] *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 & 2; Catawba Nuclear Station, Units 1 & 2), CLI-03-17, 58 NRC 419, 424 (2003) (*quoting Oconee*, CLI-99-11, 49 NRC at 337-39).

[24] 10 C.F.R. § 2.309(f)(1)(ii); *see also* Rules of Practice for Domestic Licensing Proceedings–Procedural Changes in the Hearing Process, 54 Fed. Reg. 33,168, 33,170 (Aug. 11, 1989) (Final Rule).

[25] *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 & 2), ALAB-942, 32 NRC 395, 428 (1990).

[26] *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 & 2), ALAB-899, 28 NRC 93, 97 (1988), *aff'd sub nom., Massachusetts v. NRC*, 924 F.2d 311 (D.C. Cir. 1991).

within the scope of [the] proceeding."[27] The Board, however, must determine the admissibility of the contention itself, not the admissibility of individual "bases."[28]

C. Contentions Must Be Within the Scope of the Proceeding

A petitioner must demonstrate "that the issue raised in the contention is within the scope of the proceeding."[29] The scope of the proceeding is defined by the Commission's notice of opportunity for a hearing.[30] Moreover, contentions are necessarily limited to issues that are germane to the specific application pending before the Board.[31] Any contention that falls outside the specified scope of the proceeding must be rejected.[32]

A contention that challenges an NRC rule is outside the scope of the proceeding because absent a waiver, "no rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding."[33] Furthermore, a contention that raises a matter that is, or is about to become, the subject of a rulemaking, is also outside the scope of this proceeding.[34] This includes contentions that advocate stricter requirements than agency rules impose, or that otherwise seek to litigate a generic determination established by a Commission rulemaking.[35]

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27 *Balt. Gas & Elec. Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 & 2), CLI-98-14, 48 NRC 39, 41 (1998); *see also Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18, 22 (1998).

28 *See La. Energy Servs.* ["*LES*"], *L.P.* (Nat'l Enrichment Facility), LBP-04-14, 60 NRC 40, 57 (2004) ("licensing boards generally are to litigate 'contentions' rather than 'bases'").

29 10 C.F.R. § 2.309(f)(1)(iii).

30 *See Duke Power Co.* (Catawba Nuclear Station, Units 1 & 2), ALAB-825, 22 NRC 785, 790-91 (1985).

31 *See Yankee Atomic Elec. Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 204 (1998).

32 *See Portland Gen. Elec. Co.* (Trojan Nuclear Plant), ALAB-534, 9 NRC 287, 289 n.6 (1979).

33 10 C.F.R. § 2.335(a).

34 *Oconee*, CLI-99-11, 49 NRC at 345 (*citing Potomac Elec. Power Co.* (Douglas Point Nuclear Generating Station, Units 1 & 2), ALAB-218, 8 AEC 79, 85 (1974)); *see also* Conduct of New Reactor Licensing Proceedings, Final Policy Statement, 73 Fed. Reg. 20,963, 20,972 (Apr. 17, 2008) ("New Reactor Policy Statement").

35 *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).

Similarly, any contention that collaterally attacks applicable statutory requirements or the basic structure of the NRC regulatory process must be rejected by the Board as outside the scope of the proceeding.[36] Accordingly, a contention that simply states the petitioner's views about regulatory policy—or takes issue with the nature of existing regulations—does not present a litigable issue.[37]

D. Contentions Must Raise a Material Issue

A petitioner must demonstrate "that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding."[38] As the Commission has observed, "[t]he dispute at issue is 'material' if its resolution would 'make a difference in the outcome of the licensing proceeding.'"[39] In this regard, each contention must be one that, if proven, would entitle the petitioner to relief.[40] Additionally, contentions alleging an error or omission in an application must establish some significant link between the claimed deficiency and protection of the health and safety of the public or the environment.[41]

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[36] *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), LBP-07-11, 66 NRC 41, 57-58 (2007) (*citing Phila. Elec. Co.* (Peach Bottom Atomic Power Station, Units 2 & 3), ALAB-216, 8 AEC 13, 20 (1974)).

[37] *See Peach Bottom*, ALAB-216, 8 AEC at 20-21. Within the adjudicatory context, however, a petitioner may submit a request for waiver of a rule under 10 C.F.R. § 2.335(b) as discussed in Section V.B.1 of this Answer, *infra*. Conversely, outside the adjudicatory context, a petitioner may file a petition for rulemaking under 10 C.F.R. § 2.802 or request that the NRC Staff take enforcement action under 10 C.F.R. § 2.206.

[38] 10 C.F.R. § 2.309(f)(1)(iv).

[39] *Oconee*, CLI-99-11, 49 NRC at 333-34 (*citing* Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, 54 Fed. Reg. at 33,172).

[40] *See Duke Energy Corp.* (McGuire Nuclear Station, Units 1 & 2; Catawba Nuclear Station, Units 1 & 2), CLI-02-26, 56 NRC 358, 363 n.10 (2002).

[41] *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 & 3), LBP-04-15, 60 NRC 81, 89, *aff'd*, CLI-04-36, 60 NRC 631 (2004).

E. Contentions Must Be Supported by Adequate Factual Information or Expert Opinion

A petitioner bears the burden to present the factual information or expert opinions necessary to support its contention adequately, and failure to do so requires the Board to reject the contention.[42] The petitioner's obligation in this regard has been described as follows:

> [A]n intervention petitioner has an *ironclad obligation* to examine the publicly available documentary material pertaining to the facility in question with sufficient care to enable [the petitioner] to uncover any information that could serve as the foundation for a specific contention. Stated otherwise, neither Section 189a. of the Act nor Section [2.309] of the Rules of Practice permits the filing of a vague, unparticularized contention, followed by an endeavor to flesh it out through discovery against the applicant or staff.[43]

Where a petitioner neglects to provide the requisite support for its contentions, the Board may not make assumptions of fact that favor the petitioner or supply information that is lacking.[44] The petitioner must explain the significance of any factual information upon which it relies.[45] But vague references to documents do not suffice—the petitioner must identify specific portions of the documents on which it relies.[46] In addition, a petitioner's imprecise reading of a document cannot be the basis for a litigable contention.[47]

With respect to factual information or expert opinion proffered in support of a contention, "the Board is not to accept uncritically the assertion that a document or other factual information

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42 *Yankee Atomic Elec. Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 262 (1996). *See* 10 C.F.R. § 2.309(f)(1)(v).

43 *Duke Power Co.* (Catawba Nuclear Station, Units 1 & 2), ALAB-687, 16 NRC 460, 468 (1982) (emphasis added), *vacated in part on other grounds*, CLI-83-19, 17 NRC 1041 (1983).

44 *See Ariz. Pub. Serv. Co.* (Palo Verde Nuclear Generating Station, Units 1, 2 & 3), CLI-91-12, 34 NRC 149, 155 (1991).

45 *See Fansteel, Inc.* (Muskogee, Okla. Site), CLI-03-13, 58 NRC 195, 204-05 (2003).

46 *See Pub. Serv. Co. of N.H* .(Seabrook Station, Units 1 & 2), CLI-89-3, 29 NRC 234, 240-41 (1989).

47 *Ga. Inst. of Tech.* (Ga. Tech Research Reactor, Atlanta, Ga.), LBP-95-6, 41 NRC 281, 300 (1995).

or an expert opinion supplies the basis for a contention."[48] Any supporting material provided by a petitioner, including those portions thereof not relied upon, is subject to Board scrutiny "both for what it does and does not show."[49] The Board will examine documents to confirm that they support the proposed contentions.[50]

In addition, "an expert opinion that merely states a conclusion (*e.g.*, the application is 'deficient,' 'inadequate,' or 'wrong') 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" as it is alleged to provide a basis for the contention.[51] Conclusory statements cannot provide "sufficient" support for a contention, simply because they are made by an expert.[52] In short, a contention "will be ruled inadmissible if the petitioner 'has offered no tangible information, no experts, no substantive affidavits,' but instead only 'bare assertions and speculation.'"[53]

F. Contentions Must Raise a Genuine Dispute of Material Law or Fact

The Commission has stated that the petitioner must "read the pertinent portions of the license application . . . state the applicant's position and the petitioner's opposing view," and explain why it disagrees with the applicant.[54] If a petitioner believes the license application fails to adequately address a relevant issue, then the petitioner is to "explain why the application is

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48 *Private Fuel Storage, L.L.C.* (Indep. Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 181 (1998).

49 *See Yankee Atomic Elec. Co.* (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 90, *rev'd in part on other grounds*, CLI-96-7, 43 NRC 235 (1996).

50 *See Vt. Yankee Nuclear Power Corp.* (Vt. Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 48 (1989), *vacated in part on other grounds and remanded*, CLI-90-4, 31 NRC 333 (1990).

51 *USEC, Inc.* (Am. Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006) (emphasis added) (*quoting PFS*, LBP-98-7, 47 NRC at 181).

52 *See id.* at 472.

53 *Fansteel,* CLI-03-13, 58 NRC at 203 (*quoting GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 207 (2000)).

54 Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, 54 Fed. Reg. at 33,170; *Millstone*, CLI-01-24, 54 NRC at 358.

deficient."[55] A contention that does not directly controvert a position taken by the applicant in the application is subject to dismissal.[56] Similarly, a petitioner's oversight or mathematical error does not raise a genuine issue. For example, if a petitioner submits a contention of omission, but the allegedly missing information is indeed in the license application, then the contention does not raise a genuine issue.[57]

Further, an allegation that some aspect of a license application is "inadequate" or "unacceptable" does not give rise to a genuine dispute unless it is supported by facts and a reasoned statement of why the application is unacceptable in some material respect.[58] Thus, in order to raise a genuine dispute with an applicant's analysis, a petitioner must make at least a "minimal demonstration" that the "analysis fails to meet a statutory or regulatory requirement."[59]

V. NRDC HAS FAILED TO PROFFER AN ADMISSIBLE CONTENTION

Applying the legal standards summarized above, each of NRDC's four proposed contentions is deficient on one or more grounds. As a result, the Petition must be denied for failure to proffer an admissible contention in accordance with 10 C.F.R. § 2.309(f)(1).

A. Background Relevant to Contentions 1-E, 2-E, and 3-E

Contentions 1-E through 3-E depend on NRDC's fatally flawed argument that Exelon must consider SAMAs *again* in the Limerick ER. But NRC regulations *expressly do not require* Exelon to evaluate SAMAs for the Limerick license renewal. The regulatory and procedural context for most license renewal applicants to perform a SAMA analysis, described below,

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[55] Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, 54 Fed. Reg. at 33,170; *see also Palo Verde*, CLI-91-12, 34 NRC at 156.

[56] *See Tex. Utils. Elec. Co.* (Comanche Peak Steam Electric Station, Unit 2), LBP-92-37, 36 NRC 370, 384 (1992).

[57] *See Millstone*, LBP-04-15, 60 NRC at 95.

[58] *See Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 & 4), LBP-90-16, 31 NRC 509, 521, 521 n.12 (1990).

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

irrefutably demonstrates that Exelon is not required to provide *another* SAMA analysis for Limerick. Therefore, Contentions 1-E through 3-E are direct challenges to NRC regulations and the express intent of the Commission.

1. NRC Requirement for Environmental Review Under NEPA

A brief overview of the underlying statutory framework in which this proceeding rests enables a full appreciation of why NRDC's proposed contentions are inadmissible and must be rejected by the Board. As is commonly understood, NEPA requires federal agencies like the NRC to prepare an EIS for every major federal action that may significantly affect the quality of the human environment.[60] The statement must address adverse environmental effects of the action, as well as certain alternatives.[61]

Issuance by NRC of a renewed operating license is a major federal action under NEPA.[62] NRC regulations at 10 C.F.R. § 51.53 require a license renewal application to include an ER. Applicants must describe in the ER the impacts of the proposed renewal and alternatives to those impacts.[63] Applicants seeking a renewed license and holding an operating license as of June 30, 1995, are further subject to the requirements of 10 C.F.R. § 51.53(c)(3). That Section lists the issues that an applicant must address in the ER, and those that it need not address.

2. *Limerick Ecology Action, Inc. v. U.S. NRC*, 869 F.2d 719 (3rd Cir. 1989)

Litigation over the original Limerick operating licenses was the genesis of the requirement that applicants analyze severe or beyond design basis accidents in ERs submitted to support NRC NEPA reviews for construction permits or operating licenses.[64] Prior to this ruling,

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60 *See* 42 U.S.C. § 4332(2)(C).

61 *See id*.

62 *See La. Energy Servs. L.P.* (Nat'l Enrichment Facility), LBP-06-8, 63 NRC 241, 258 (2006).

63 *See* 10 C.F.R. § 51.53(c).

the NRC reasoned that the probability of these accidents was so low that consideration of the consequences under NEPA was unnecessary.[65]

Consistent with that prior reasoning, the NRC in 1985 issued its "Policy Statement on Severe Reactor Accidents Regarding Future Designs and Existing Plants" ("Policy Statement").[66] The Policy Statement declared that severe accident mitigation *design* alternatives ("SAMDAs") need not be included in individual license proceedings.[67] SAMDAs are possible plant design modifications that may lessen the impact of a severe accident. The Commission concluded that reviewing alternatives for mitigation of accidents more severe than the design basis was better left to the "broad examination" of the Commission.[68] Although NEPA requires federal agencies to prepare detailed statements to address environmental impacts of federal actions, as described above, NEPA permits agencies to address and evaluate generic environmental impacts by rule.[69]

In the early 1980s, Philadelphia Electric Co. ("PECO"), the original owner of Limerick, applied for full power operating licenses for the two nuclear units located at the plant.[70] Several intervenors challenged that application, in part, based on PECO's failure to consider SAMDAs in

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64 *See Limerick Ecology Action, Inc. v. U.S. NRC*, 869 F.2d 719, 726 (3rd Cir. 1989).

65 *Id*.

66 *See generally* Policy Statement on Severe Reactor Accidents Regarding Future Designs and Existing Plants, 50 Fed. Reg. 32,138 (1985).

67 *See id*. at 32,139.

68 *Id*. at 32,144.

69 *See Balt. Gas & Elec. Co. v. Natural Res. Def. Council*, 462 U.S. 87, 97-98 (1983).

70 *See* Receipt of Application for Facility Operating Licenses; Consideration of Issuance of Facility Operating Licenses; Availability of Applicant's Environmental Report; and Opportunity for Hearing, 46 Fed. Reg. 42,557, 42,557 (1981).

its operating license ER.[71] The licensing board did not admit that contention.[72] An Appeal Board affirmed the licensing board's decision[73] and the Commission declined review.[74]

On appeal, the U.S. Court of Appeals for the Third Circuit found that the NRC's failure to consider SAMDAs violated NEPA, and remanded the matter for consideration of the SAMDA contention.[75] The Third Circuit further held that NRC must consider SAMDAs in individual operating license proceedings, "[b]ecause the action not to consider SAMDAs was promulgated as a policy statement, rather than a rule, and because it applies to an issue that [the court] find[s] is unlikely to be treated as generic."[76]

In response to the decision by the Third Circuit, the NRC Staff completed an analysis of SAMDAs for the Limerick operating licenses as part of initial plant licensing.[77] In August 1989, the Staff published its findings in the NUREG-0974 Supplement, Final Environmental Statement related to the operation of Limerick Generating Station, Units 1 and 2 ("Limerick EIS").[78] In the Limerick EIS, the Staff concluded that, based on its analysis of the cost of SAMDAs and the resulting cost per person-rem averted, no modifications to the plant were justified for the purpose of mitigating severe accident risks.[79]

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71 *See Limerick Ecology Action*, 869 F.2d at 722-23.

72 *See id.* at 732.

73 *See Phila. Elec. Co.* (Limerick Generating Station, Units & 2), ALAB-819, 22 NRC 681, 695-96 (1985) (*quoting* Policy Statement, 50 Fed. Reg. at 32,145).

74 *See Phil. Elec. Co.* (Limerick Generating Station, Units 1 & 2), CLI-86-5, 23 NRC 125 (1986).

75 *Limerick Ecology Action*, 869 F.2d at 741.

76 *Id.*

77 NUREG-0974 Supp., Final Environmental Statement Related to the Operation of Limerick Generating Station, Units 1 and 2 (Aug. 1989) ("Limerick EIS"), *available at* ADAMS Accession No. ML11221A204.

78 *See generally* Limerick EIS.

79 *See id.* at vi.

3. GEIS and 10 C.F.R. Part 51 Rulemaking

In the years that followed the Third Circuit's *Limerick* decision, the NRC continued to evaluate those environmental impacts of licensing that it could address generically, consistent with NEPA. The Commission reasoned that many environmental issues that apply to license renewal applicants, in particular, could be resolved generically.[80] Thus, in 1996, the NRC published its generic findings in NUREG-1437, Generic Environmental Impact Statement for License Renewal of Nuclear Plants ("GEIS").[81]

The NRC also amended its environmental regulations at 10 C.F.R. Part 51 to reflect certain findings in the GEIS.[82] Part 51 divides the environmental requirements for license renewal into Category 1 and Category 2 issues.[83] Category 1 issues are those resolved generically by the GEIS or that otherwise need not be addressed as part of license renewal, whereas Category 2 issues require plant-specific review.[84] For each license renewal applicant, Part 51 requires that the NRC Staff prepare a plant-specific supplement to the GEIS that adopts applicable generic impact findings from the GEIS, evaluates any new and significant information, and discusses site-specific impacts.[85]

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80 Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. 28,467, 28,467-28,468 (June 5, 1996).

81 NUREG-1437, Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Vol. 1 (May 1996), *available at* ADAMS Accession No. ML040690705. Although the NRC has issued a draft revision of the GEIS for public comment, that draft does not propose changes to the requirement that certain plants conduct SAMA analyses at license renewal. *See* NUREG-1437, Draft [GEIS], Rev. 1, at 4-154 to 4-155 (July 2009) ("alternatives to mitigate severe accidents still must be considered for all plants that have not considered such alternatives"), *available at* ADAMS Accession No. ML090220654; *see also* Notice of Availability of the Draft Revision to [GEIS], Revision 1, NUREG-1437 and Public Meetings, 74 Fed. Reg. 38,239 (July 31, 2009).

82 *See* Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. at 28,467.

83 *See generally*, 10 C.F.R. pt. 51, subpt. A, app. B, tbl. B-1.

84 *See* Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. at 28,474.

85 *See* 10 C.F.R. § 51.95(c).

With respect to severe accidents, the GEIS provides a generic "bounding" evaluation of severe accident impacts and the technical basis for that evaluation.[86] Based on the GEIS evaluation, Part 51 concludes that the "[t]he probability weighted consequences of atmospheric releases, fallout onto open bodies of water, releases to ground water, and societal and economic impacts from severe accidents are *small for all plants*."[87] The Commission determined that the GEIS analysis for the impacts of severe accidents would generally over-predict environmental consequences.[88] Thus, a plant-specific analysis of severe accident *impacts* is not required in individual license renewal proceedings.[89]

With respect to *mitigation* of severe accidents, however, the Commission, with three exceptions, did not make a generic finding.[90] The Commission determined that SAMAs must be considered on a site-specific basis, pursuant to the NRC's NEPA regulations and the Third Circuit's 1989 *Limerick* decision.[91] The three exceptions were Limerick Units 1 and 2, Comanche Peak Units 1 and 2, and Watts Bar.[92] The Commission did not require these plants – that had already conducted a plant-specific SAMDA analysis at the operating license stage – to conduct *another* SAMA analysis for purposes of license renewal.[93] The Commission codified this ruling in Section 51.53(c)(3)(ii)(L), which requires:

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86 *See Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 316 (2010); GEIS at § 5.3.3.

87 10 C.F.R. pt. 51, subpt. A, app. B, tbl. B-1 (Postulated Accidents; Severe accidents) (emphasis added).

88 Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. at 28,480.

89 *See id*. at 28,480; *see also Pilgrim*, CLI-10-11, 71 NRC at 316 ("NRC SAMA analyses are not a substitute for, and do not represent, the NRC NEPA analysis of potential impacts of severe accidents.").

90 Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. at 28,480.

91 *See id.*; *see also Limerick Ecology Action*, 869 F.2d at 736-39.

92 *See* Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. at 28,481.

93 *See id.*

> If the staff has not previously considered severe accident mitigation alternatives for the applicant's plant in an environmental impact statement or related supplement or in an environmental assessment, a consideration of alternatives to mitigate severe accidents must be provided.[94]

Thus, the Commission determined in the Part 51 rulemaking that "the issue of severe accidents must be reclassified as a Category 2 issue that requires a consideration of severe accident mitigation alternatives, *provided this consideration has not already been completed*."[95] In other words, consideration of severe accident mitigation alternatives is a Category 1 issue for Limerick, because the NRC Staff previously considered SAMAs in the Limerick operating license stage for the site.

4. Treatment of SAMAs in Limerick ER

In this procedural context, and within this regulatory framework, Exelon prepared its ER for license renewal. For compliance with Section 51.53(c)(3)(ii)(L), Exelon did not conduct another SAMA analysis.[96] Nor did Exelon incorporate the Limerick 1989 SAMDA analysis in the Limerick license renewal ER, as NRDC erroneously suggests.[97] Exelon did, however, evaluate the significance of new information, post-dating the 1989 EIS and related to population increase, offsite economic cost risk, criteria for assigning cost per person-rem averted, and seismic hazards.[98] Exelon concluded "that there is no new and significant information relevant to the conclusions codified in 10 C.F.R. § 51.53(c)(3)(ii)(L)."[99]

B. Contention 3-E is Not Admissible

Exelon addresses Contention 3-E before Contentions 1-E and 2-E because the underlying premise of these three contentions is NRDC's assertion, made directly in Contention 3-E, that

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94 *Id.* § 51.53(c)(3)(ii)(L); *see also* 10 C.F.R. pt. 51, subpt. A, app. B, tbl. B-1.

95 Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. at 28,480 (emphasis added); *see also* 10 C.F.R. pt. 51, subpt. A, app. B, tbl. B-1 (identifying severe accident mitigation as a Category 2 issue).

Exelon's ER for Limerick must include *another* SAMA analysis. Once Exelon demonstrates *why* it does not need to perform another SAMA analysis, it becomes evident that all three contentions must be rejected in their entirety.

Contention 3-E alleges that Exelon erroneously concluded that its 1989 SAMDA analysis for Limerick was a "SAMA analysis," within the meaning of Section 51.53(c)(3)(ii)(L), and therefore improperly failed to include a SAMA analysis in its ER.[100] NRDC claims that Exelon has failed to demonstrate that the Limerick SAMDA analysis satisfies NEPA requirements for SAMA analyses.[101] NRDC lists several "relevant factors" for a SAMA analysis, provided in industry guidance approved by the NRC, and asserts that the SAMDA fails to include those factors.[102]

When NRDC's approach to this issue is stripped of its semantic trappings, it becomes a very straightforward argument; one that is plainly inadmissible because it constitutes nothing more than an impermissible challenge to Section 51.53(c)(3)(ii)(L). Contention 3-E is therefore outside the scope of this proceeding.[103]

Moreover, as explained below, those portions of Contention 3-E that allege that the Limerick SAMDA analysis *must* address the factors enumerated in NRC guidance for SAMA

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96 *See* ER at 4-49.

97 *See* Petition at 16; ER at 5-4.

98 *See* ER at 5-6 to 5-9.

99 *Id.* at 4-49. Because the NRC "does not specifically define the term significant," Exelon followed CEQ guidance and determined that "MODERATE or LARGE impacts, as defined by NRC, would be significant." *Id*. at 5-2 to 5-3. Exelon concluded, "new information would be considered significant if it would cause a materially different result in the assessment of impacts than were determined in prior environmental assessments conducted consistent with [NEPA]." *Id*. at 5-7.

100 Petition at 21.

101 *See id.* at 31.

102 *Id.* at 21-22.

103 *See* 10 C.F.R. § 2.309(f)(1)(iii).

analyses, or that Exelon must demonstrate and a licensing board must agree that the Limerick SAMDA analysis satisfies certain NEPA requirements, fail as a matter of law. Contention 3-E thus does not raise a genuine dispute regarding issues that are material to this proceeding, and is inadmissible in that regard.

Accordingly, the Board must deny admission of Contention 3-E for failure to meet 10 C.F.R. § 2.309(f)(1)(iii), (iv), and (vi).

1. Contention 3-E Impermissibly Challenges NRC Regulations and is Therefore Outside the Scope of this Proceeding

Contention 3-E challenges Section 51.53(c)(3)(ii)(L), which—as described above—requires license renewal applicants to include a SAMA analysis in their ER, *unless the NRC Staff has previously considered SAMAs for the plant in an EIS or related supplement*.[104] Contention 3-E vaguely alleges that the SAMDA analysis conducted by the NRC Staff in the 1989 Limerick EIS somehow does not qualify as the exact SAMA analysis anticipated by the rule.[105] This word play is preposterous, and it runs afoul of the plain language of the rule and the Commission's own statements during the Part 51 rulemaking. It is devoid of the legal or factual bases requisite for its admission in this proceeding pursuant to 10 C.F.R. § 2.309(f).

As discussed above, at the time that the NRC promulgated Section 51.53(c)(3)(ii)(L), the Staff had only considered SAMDAs in an EIS (or related supplement) for three plant sites: Limerick Units 1 and 2; Comanche Peak Units 1 and 2; and Watts Bar. The Commission clearly had these three specific plant sites in mind when it promulgated Section 51.53(c)(3)(ii)(L) and excused these sites from performing another mitigation alternatives analysis as part of a future license renewal effort:

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[104] *See* Petition at 21.

[105] *See id.*

> NRC staff considerations of severe accident mitigation alternatives have already been completed and included in an EIS or supplemental EIS for Limerick, Comanche Peak, and Watts Bar. Therefore, severe accident mitigation alternatives need not be reconsidered for these plants for license renewal.[106]

NRDC's assertion to the contrary is patently absurd.[107] If the rule is held to require additional SAMA analyses for Limerick, then such an interpretation would render the rule obsolete and meaningless.[108] That was clearly not the intent of the Commission. The only reasonable reading of Section 51.53(c)(3)(ii)(L) is that an ER for the renewal of the Limerick operating licenses need not include a SAMA analysis.

As discussed above, a proposed contention that challenges an NRC rule is outside the scope of the proceeding because, absent a waiver, "no rule or regulation of the Commission . . .

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[106] Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. at 28,481; *see also infra* Section C.2.

It bears noting that SAMDAs are slightly different than SAMAs. Because SAMDAs were considered before the plant was operational, NRC had flexibility in the range of design alternatives considered for the analysis. *See, e.g.*, Licenses, Certifications, and Approvals for Nuclear Power Plants, 72 Fed. Reg. 49,352, 49,426-27 (Aug. 28, 2007) (explaining the NRC's determination that SAMDAs must be considered at the design certification stage because "[i]t is most cost effective to incorporate SAMDAs into the design at the design certification stage. Retrofitting a SAMDA into a design certification once site-specific design and engineering for a nuclear power facility have been completed would increase the cost of implementing a SAMDA"). SAMA analyses, on the other hand, do not consider changes to the operating plant's *design*. *See Duke Energy Corp.*(McGuire Nuclear Station, Units 1 & 2; Catawba Nuclear Station, Units 1 & 2), CLI-02-17, 56 NRC 1, 5 (2002) (discussing plant changes in hardware, procedures, or training).

[107] NRDC notes that Statements of Consideration for NRC rulemakings are not binding in and of themselves, but in doing so, NRDC misses the larger picture. *See* Petition at 31 n.9. Statements of Consideration serve to illustrate or explain rules that *are* legally binding. In this case, Section 51.53(c)(3)(ii)(L) clearly excepts Limerick from the requirement to conduct a SAMA analysis at the license renewal stage. The Commission's explanation of that regulation, while not legally binding, serves to further clarify what is already evident by the plain language of the rule.

[108] Federal courts will not adopt an interpretation of a statute or regulation when such an interpretation would render the particular law meaningless. *See*, *e.g.*, *Citizens Bank of Md. v. Strumpf*, 516 U.S. 16, 20 (1995) (internal citations and quotations omitted) ("It is an elementary rule of construction that 'the act cannot be held to destroy itself.'"); *Sec'y of Labor v. Twentymile Coal Co.*, 411 F.3d 256, 261 (D.C. Cir. 2005) (dismissing defendant's interpretation of the Mine Act because it would render the pertinent regulation a nullity); *Disabled in Action of Pa. v. S.E. Pa. Transp. Auth.*, 539 F.3d 199, 211 (3d Cir. 2008) (a statute should be construed so as to give effect to all of its provisions; it should not be construed so as to render a portion of it superfluous, void, or meaningless).

is subject to attack . . . in any adjudicatory proceeding."[109] To seek waiver of a rule in a particular adjudicatory proceeding, a petitioner must submit a petition pursuant to 10 C.F.R. § 2.335.

In a blatant attempt to sidestep this requirement, however, NRDC whispers in a footnote that NRC regulations require that it wait to file any waiver petition until it is admitted as a party to this proceeding.[110] NRDC is incorrect as a matter of law. The Commission has been on record, for at least a decade, ruling that "*petitioners* with new information showing that a generic rule would not serve its purpose at a particular plant may seek a waiver of the rule."[111] Exelon is not aware of any case where a waiver request was rejected because a petitioner was not yet admitted as a party to the proceeding,[112] and not surprisingly, NRDC has cited none.[113]

Nor is this the first time that NRDC's co-counsel has tried to defer filing a waiver petition in a license renewal proceeding. Specifically, in the *Vermont Yankee* license renewal proceeding, the Vermont Department of Public Service ("DPS"), represented by NRDC's co-counsel, proffered a contention alleging that the applicant's ER failed to provide "new and

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[109] 10 C.F.R. § 2.335(a).

[110] Petition at 25 n. 7.

[111] *Turkey Point*, CLI-01-17, 54 NRC at 12.

[112] *See*, *e.g.*, *Pac. Gas & Elec. Co.* (Diablo Canyon Nuclear Power Plant, Units 1 & 2), CLI-11-11, 74 NRC __, slip op. at 23-30 (Oct. 12, 2011) (denying intervenor's waiver request, filed contemporaneously with petition to intervene, for failure to show special circumstances at Diablo Canyon requiring site-specific analysis of the environmental impacts of spent fuel pool storage); *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plan, Unit 1), LBP-07-11, 66 NRC 41, 57-58 (2007) (noting that petitioner may submit a request for a waiver to raise concerns regarding a Commission regulation); *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station Units 2 & 3), LBP-05-16, 62 NRC 56, 65, 75 (2005) (certifying Petitioner's waiver petition to the Commission).

[113] Notably, in affirming the Commission's treatment of an interested governmental entity as the equivalent of a "party" for purposes of a Section 2.802(d) request for suspension, the Court of Appeals for the First Circuit reasoned that "'[p]arty' can both be defined in one context as a term of art, *e.g.*, as one who has demonstrated standing and whose contention has been admitted for hearing in a licensing adjudication, and deployed in its more general sense of one who participates in a proceeding or transaction." *Massachusetts v. U.S.*, 522 F.3d 115, 129 (1st Cir. 2008) (citation omitted).

significant information" regarding onsite storage of spent fuel.[114] At oral argument on contention admissibility, NRDC's co-counsel argued that DPS could not file a waiver request until after that Board's ruling on contention admissibility because it was not yet a "party" to the proceeding.[115] But the Board did not endorse this position. Rather, it soundly rejected that contention because the onsite storage of spent fuel is a Category 1 issue, and absent a waiver under Section 2.335, the alleged failure of an applicant to provide new and significant information is not litigable.[116]

In sum, Contention 3-E is an impermissible challenge to NRC regulations, in violation of Section 2.335. NRDC has not filed a Section 2.335 request for waiver. As a result, Contention 3-E is outside the scope of this proceeding, contrary to Section 2.309(f)(1)(iii), and its admission must be denied in its entirety.

2. Contrary to Contention 3-E, Exelon Need Not Apply Guidance for SAMA Analyses

As a purported basis for Contention 3-E, NRDC next argues that the SAMDA analysis presented in the 1989 Limerick EIS is not a SAMA analysis within the meaning of Section 51.53(c)(3)(ii)(L).[117] In pursuing this line of argument, NRDC cites several provisions of NEI 05-01,[118] the industry guidance that applies to such analyses.[119] NRDC generally asserts that the 1989 Limerick SAMDA analysis fails to follow some steps described in the NEI

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[114] Vermont Department of Public Service Notice of Intention to Participate and Petition to Intervene at 12 (May 26, 2006), *available at* ADAMS Accession No. ML061640035.

[115] *See* Oral Arguments Tr. at 173:6-174:7, 179:15-25, *Entergy Nuclear Vt. Yankee* (Vt. Nuclear Power Station), No. 50-271 (Aug. 1, 2006), *available at* ADAMS Accession No. ML062210038.

[116] *Entergy Nuclear Vt. Yankee LLC* (Vt. Yankee Nuclear Power Station), LBP-06-20, 64 NRC 128, 169-70 (2006).

[117] *See* Petition at 21-22.

[118] NEI 05-01, Severe Accident Mitigation Alternatives (SAMA) Analysis, Guidance Document, Rev. A (Nov. 2005) ("NEI 05-01"), *available at* ADAMS Accession No. ML060530203.

[119] *See id.*

guidance document, and concludes that the SAMDA analysis is therefore legally insufficient to qualify Limerick for the exception in 10 C.F.R. § 51.53(c)(3)(ii)(L) from the requirement to perform a SAMA analysis.[120]

By alleging that Exelon must somehow satisfy NEI 05-01 in the Limerick ER, NRDC exposes two flaws in Contention 3-E. First, NEI 05-01 is only a guidance document, and therefore imposes no binding legal requirements on Exelon or any other applicant. Second, NEI 05-01 applies *only* to SAMA analyses, which Section 51.53(c)(3)(ii)(L) provides that Limerick need not conduct.

Even though the NRC has endorsed the use of NEI 05-01, applicants are not *required* to adhere to the guidance contained therein.[121] Moreover, because NRC rules do not require Limerick either to conduct an additional SAMA analysis or to revisit the existing SAMDA analysis, Exelon need not adhere to, nor be guided by, NEI 05-01 in its Limerick ER. NEI-05-01 is simply irrelevant to Limerick's license renewal application.

And certainly this guidance document, which was developed in 2005 and endorsed by the NRC in 2007, does not apply *retroactively* to a SAMDA analysis completed in 1989. Indeed, in recommending the use of NEI 05-01, the NRC Staff noted: "Although this final [License Renewal Interim Staff Guidance endorsing NEI 05-01] does not convey a change in the NRC's regulations or how they are interpreted, it is being provided to facilitate complete preparation of

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120 *See id*.

121 *See* Final License Renewal Interim Staff Guidance LR-ISG-2006-03: Staff Guidance for Preparing Severe Accident Mitigation Alternatives Analyses encl. at 1-2 (Aug. 2007) ("LR-ISG-2006-03") ("The staff is *recommending* that applicants for license renewal follow the guidance provided in NEI 05-01, Revision A, when preparing their SAMA analyses. The staff finds that NEI 05-01, Revision A, describes existing NRC regulations, and facilitates complete preparation of SAMA analysis submittals. . . . This LR-ISG provides a clarification of existing guidance *with no additional requirements*.") (emphasis added), *available at* ADAMS Accession No. ML071640133; *see also* Draft Regulatory Guide DG-4015, Preparation of Environmental Reports for Nuclear Power Plant License Renewal Applications, Rev. 1, at 48 (July 2009) (stating that applicants "should consider . . . the guidance provided in NEI 05-01"), *available at* ADAMS Accession No. ML091620409; NEI 05-01, at i.

future SAMA analysis submittals in support of applications for license renewal."[122] NRDC's assertion that the 1989 SAMDA analysis must comply with 2005 guidance is thus unsupported by the NRC's own statements, not to mention, Section 51.53(c)(3)(ii)(L), which requires no additional SAMA analysis for Limerick – period.

Contention 3-E, thus, fails to raise a material issue or genuine dispute pursuant to Section 2.309(f)(1)(iv) and (vi), and its admission must be denied.

3. NRDC's Other Arguments in Contention 3-E are Legally Flawed

Finally, NRDC asserts that the 1989 SAMDA analysis for Limerick is not a "SAMA analysis" under Section 51.53(c)(3)(ii)(L), because it has not been: (1) measured against NEPA requirements; (2) shown by Exelon to satisfy NRC regulations; and (3) tested or independently evaluated by a licensing board.[123]

Exelon, however, bears no legal obligation to revisit, reverify, or reconfirm the adequacy with respect to current guidelines of its previous SAMDA analysis for purposes of the Limerick license renewal proceeding.[124] Nor is the previous analysis challengeable in this proceeding.[125]

Because there is no legal requirement for the 1989 Limerick SAMDA analysis to satisfy current NEPA or NRC requirements for purposes of license renewal,[126] or that licensing boards independently make such a finding,[127] Contention 3-E fails to raise a genuine dispute on an issue that is material to this proceeding. Accordingly, 10 C.F.R. § 2.309(f)(1)(vi) requires that this Contention be dismissed.

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[122] LR-ISG-2006-03 encl. at 1 (emphasis added).

[123] *See* Petition at 30-31.

[124] *See* 10 C.F.R. § 51.53(c).

[125] *See Turkey Point*, CLI-01-17, 54 NRC at 10 ("the scope of Commission review determines the scope of admissible contentions in a renewal hearing").

[126] *See id*.

[127] NRDC provides no legal citation to support this argument. *See* Petition at 30-31.

In summary for Contention 3-E, NRDC's assertion that the Limerick ER must contain another SAMA analysis is a direct challenge to NRC rules, fails to establish a genuine dispute over issues that are material to this proceeding, and is inadmissible under Section 2.309(f)(1). As demonstrated below, because Contentions 1-E and 2-E rely on the regulatory challenge upon which Contention 3-E is based, Contentions 1-E and 2-E are inadmissible as well because their foundation in Contention 3-E is legally unsound.

C. Contention 1-E is Not Admissible

Contention 1-E alleges that Exelon erroneously concluded that "new" information related to its SAMDA analysis was not "significant," failed to consider new and significant information in violation of Section 51.53(c)(3)(iv), and therefore failed to provide a legally-sufficient SAMA analysis in its ER.[128] Contention 1-E specifically alleges that Exelon's ER fails to adequately consider "new and significant" information regarding:

(1) population growth within a 10 and 50 mile radius of the plant;[129]
(2) mitigation alternatives developed for other BWR Mark II containment reactors;[130]
(3) plausible accident scenarios;[131]
(4) actual core damage events;[132] and
(5) off-site economic costs.[133]

Contention 1-E also alleges that the Limerick ER failed to consider certain environmental impacts.[134] The contention is supported by the combined Declaration of Thomas B. Cochran, Ph.D, Matthew G. McKinzie, Ph.D, and Christopher J. Weaver, Ph.D ("Declaration").[135]

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[128] Petition at 16.

[129] *See id.* at 16-17 (Bases 1-2).

[130] *Id.* at 17 (Basis 3).

[131] *Id*.

[132] *Id.* at 18 (Basis 4).

[133] *See id.* (Bases 5-6).

Contention 1-E is inadmissible because, like Contention 3-E, it constitutes an impermissible challenge to NRC regulations. The NRC regulation cited by NRDC, Section 51.53(c)(3)(iv), requires license renewal applicants to include in their ER "any new and significant information regarding the environmental impacts of license renewal of which the applicant is aware."[136] As demonstrated in Section C.1 below, that regulation does not nullify the regulation at Section 51.53(c)(3)(ii), which excepts Limerick from the requirement to conduct a SAMA analysis for license renewal. Commission precedent clearly requires that—absent a waiver—an Atomic Safety and Licensing Board must reject any contention that challenges the applicant's consideration of "new and significant" information regarding a matter that NRC rules do not require the applicant to address.[137] Hence, the Board need not look further for justification to reject Contention 1-E.

Even without the Commission precedent mentioned in the paragraph above, Contention 1-E fails to satisfy the Commission's admissibility requirements. As explained in Section C.2 below, NRDC fails to demonstrate a genuine dispute over a material issue for each example of allegedly "new and significant" information that Contention 1-E asserts Exelon did or should have considered.

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134 *Id.* at 19 (Basis 7).

135 Declaration of Thomas B. Cochran, Ph.D., Matthew G. McKinzie, Ph.D., and Christopher J. Waver, Ph.D., on Behalf of the Natural Resources Defense Council (Nov. 11, 2011), *available at* ADAMS Accession No. ML11326A322. At the contention admissibility stage, it is also necessary for the Board to consider a proffered expert's qualifications in evaluating whether a contention is adequately supported. *Progress Energy Fla., Inc.* (Levy Cnty. Nuclear Power Plants, Units 1 & 2), CLI-10-2, 71 NRC 27, 40 (2010). Thus, the Board should ensure that the proffered expert has at least a minimal amount of knowledge to prepare a report for the purposes of supporting a contention. *Id.*

136 The Commission has explained that "new and significant information" is that which presents "a seriously different picture of the environmental impact of the proposed project from what was previously envisioned." *See Union Elec. Co.* (Callaway Plant, Unit 2), CLI-11-05, 74 NRC __, slip op. at 31 (Sept. 9, 2011) (*citing Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-99-22, 50 NRC 3, 14 (1999); *see also Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 372-73 (1989); *Sierra Club v. Froehlke*, 816 F.2d 205, 209-10 (5th Cir. 1987).

137 *See* discussion *infra* Section 5.C.1.

Accordingly, the Board must deny admission of Contention 1-E for failure to meet Sections 2.309(f)(1)(iii), (iv), and (vi).

1. NRDC Cannot Challenge Exelon's Consideration of New and Significant Information Related to SAMA Analyses, Absent a Wai ver from the Commission

Contention 1-E principally asserts that the Limerick license renewal ER fails to adequately consider certain new and significant information related to SAMAs.[138] NRDC, in effect, attempts to use Section 51.53(c)(3)(iv), which requires license renewal applicants to consider new and significant information, to trump Section 51.53(c)(3)(ii)(L). Section 51.53(c)(3)(iv), however, is not a "loophole" through which NRDC may litigate matters that the NRC has resolved generically through rulemaking. Exelon's consideration of new and significant information related to SAMAs does not alter this fact. As explained below, NRDC's argument must fail given its failure to seek and obtain waiver from the Commission, pursuant to the procedures in 10 C.F.R. § 2.335. This conclusion is consistent with the regulatory history of Section 51.53, as well as legal precedent from NRC licensing boards, the Commission, and the U.S. Court of Appeals for the First Circuit, described below.

First, NRDC's proposed reading of Section 51.53(c)(3)(iv) in concert with Section 51.53(c)(3)(ii)(L) would eviscerate the latter. It would be illogical for the rule to except Limerick from the requirement to include a SAMA analysis in its license renewal ER, but then subject the 1989 Limerick SAMDA analysis to litigation in a license renewal proceeding. The regulatory analysis that follows is consistent with the only reasonable reading: that the Commission did not intend to subject the original Limerick SAMDA analysis to further litigation at the license renewal stage.

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[138] *See* Petition at 16.

Second, both the Commission and the courts have held that a petitioner may not challenge new and significant information related to a Category 1 issue in a licensing proceeding, absent a waiver from the Commission. Importantly, for Limerick and certain other plants, SAMA analysis is a Category 1 issue by virtue of those plants' previous completion of NRC-approved SAMDA analyses. The fact that the SAMA provision at issue is in Section 51.53(c)(3)(ii) and the explicit reference to Category 1 issues is in Section 51.53(c)(3)(i) is not legally significant, also as explained below. Thus, because NRDC has not sought the requisite waiver, its attempt to challenge Exelon's ER is inadmissible on procedural grounds.

By way of background, Section 51.53(c) contains the NRC's requirements for a license renewal applicant's environmental review. Section 51.53(c)(1) requires that a license renewal applicant submit an ER, and Section 51.53(c)(2) describes the required components of that ER. Section 51.53(c)(3) provides that the ER "shall include the information required in paragraph (c)(2) of this section *subject to the following conditions and considerations*." Emphasis added. Finally, Section 51.53(c)(3) then lists four subsections: (i), (ii), (iii), and (iv).

Subsections (i), (ii), and (iv) are relevant to the instant analysis. Subsection (i) provides that "Category 1" issues need not be addressed in an ER. Subsection (ii) contains specific analyses that must be included in an ER, and other analyses that need not be included. Subsection (iv) requires the ER generally to address certain "new and significant information."

Although the requirement at issue regarding the SAMA analysis provision is located in Subsection 51.53(c)(3)(ii), the Commission has determined that for Limerick and two other plants (Comanche Peak and Watts Bar), SAMA analyses are a Category 1 issue. For example, in the 1996 rulemaking modifying Part 51, the NRC stated: "the issue of severe accidents must be reclassified as a Category 2 issue that requires a consideration of severe accident mitigation

alternatives, *provided this consideration has not already been completed*."[139] Similarly, in its discussion of SAMAs, the 1996 GEIS states that "[s]ite specific SAMDA analyses were performed for Limerick, Comanche Peak, and Watts Bar,"[140] and "Staff evaluations of alternatives to mitigate severe accidents have already been completed and included in an EIS or supplement for Limerick, Comanche Peak, and Watts Bar; therefore, *severe accident mitigation need not be reassessed for these plants for license renewal*."[141] The GEIS concludes that "severe accidents are a Category 2 issue *for plants that have not performed a site-specific consideration of severe accident mitigation and submitted that analysis for Commission review*."[142] In other words, for Limerick, Comanche Peak, and Watts Bar, consideration of SAMAs is a Category 1 issue.

This is consistent with the interpretations in the GEIS of other parts of Section 51.53(c)(3)(ii). For example, consider Section 51.53(c)(3)(ii)(D), which provides that a license renewal ER must include, "[i]f the applicant's plant is located at an inland site and utilizes cooling ponds, an assessment of the impact of the proposed action on groundwater quality." Because the South Texas and Turkey Point plants have cooling ponds in salt marshes, they are not subject to the requirements of Section 51.53(c)(3)(ii)(D).[143] The GEIS is explicit that for these plants, "this is a Category 1 issue."[144]

Again, it is well-settled that, absent a waiver from the Commission, Category 1 issues are not subject to litigation in a license renewal proceeding, irrespective of whether an applicant

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[139] Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. at 28,480 (emphasis added).

[140] GEIS at 5-107.

[141] *Id.* at 5-114 (emphasis added).

[142] *Id.* at 5-116.

[143] *See* GEIS at 4-122.

[144] *Id.*

discusses new and significant information related to a Category 1 issue in an ER. The applicant's treatment of Category 1 issues is simply not litigable. As one Board correctly stated, under Commission precedent, "an allegation that the applicant has failed to address, *or has inadequately addressed*, [new and significant information relating to a Category 1 issue]" is inadmissible.[145]

The Boards' rulings in *Pilgrim* and *Vermont Yankee* license renewal proceedings are directly applicable here and underscore the inadmissibility of NRDC's contention. In both *Pilgrim* and *Vermont Yankee*, the Massachusetts Attorney General ("AG") proffered one contention challenging Entergy's ERs on the basis that they failed to address new and significant information regarding a Category 1 issue (specifically, a severe spent fuel pool fire).[146] The AG asserted that, even if the environmental consequences of spent fuel storage are Category 1 issues, a "plain reading" of Section 51.53(c)(3)(iv) leads to the conclusion that the new and significant information an applicant provides must include Category 1 issues, and that the petitioner is entitled to challenge the adequacy of the ER in this regard.[147]

Both the *Pilgrim* and *Vermont Yankee* Boards disagreed with the AG, ruling that a petitioner may not challenge the applicant's consideration of new and significant information

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[145] *Vt. Yankee*, LBP-06-20, 64 NRC at 156 (emphasis added) ("assuming *arguendo* that an ER fails to include new and significant information (known to the applicant) relating to a Category 1 environmental issue and thus fails to comply with 10 C.F.R. § 51.53(c)(3)(iv), does this give rise to an admissible contention? Normally, the answer would be yes. Indeed, the essence of virtually all admissible contentions is an allegation that the applicant has failed to address, or has inadequately addressed, some legally required matter. In this case, however, the Commission has answered the question in the negative. The AG's contention is therefore inadmissible.").

[146] *See Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), LBP-06-23, 64 NRC 257, 280 (2006); *Vt. Yankee*, LBP-06-20, 64 NRC at 152.

[147] *See Pilgrim*, LBP-06-23, 64 NRC at 298 at n.170.

related to Category 1 issues.[148] And both Boards appropriately relied on binding Commission precedent.[149] Specifically, they began by referencing the Commission's holding in *Turkey Point* that a petitioner may not challenge a license renewal applicant's consideration of Category 1 issues, absent a waiver.[150] As the *Pilgrim* Board explained:

> Section 51.53(c)(3)(iv) may well be viewed as being ambiguous, in that it clearly conflicts with Section 51.53(c)(3)(i) and there is no 'plain language' explicitly stating that § 51.53(c)(3)(iv) creates an exception to Section 51.53(c)(3)(i) – in *any* context. From this perspective, the Commission . . . may be viewed as having the discretion to state its interpretation of these regulatory provisions as it did in *Turkey Point*. And thus this Licensing Board would appear to be bound by the Commission's interpretation of § 51.53(c)(3)(iv) in *Turkey Point*, to the effect that § 51.53(c)(3)(iv) creates an exception to Section 51.53(c)(3)(i) in the context of the requirements for ERs and EISs but *not* with regard to the scope of issues permitted to be raised in contentions in a license renewal adjudication context, absent a waiver . . . .[151]

The Boards further noted the Commission's reasoning in *Turkey Point* that, while NRC rules "provide a number of opportunities for individuals to alert the Commission to new and significant information that might render a generic finding invalid, either with respect to all nuclear power plants or for one plant in particular," individual licensing proceedings are not one such opportunity.[152]

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148 *See Vt. Yankee*, LBP-06-20, 64 NRC at 155-61; *Pilgrim*, LBP-06-23, 64 NRC at 294-300. Moreover, the *Pilgrim* Board reached this result despite finding the AG's interpretation to be "a reasonable reading of the rule." *See Pilgrim*, LBP-06-23, 64 NRC at 299 n.170.

149 *See Vt. Yankee*, LBP-06-20, 64 NRC at 155-61; *Pilgrim*, LBP-06-23, 64 NRC at 294-300.

150 *See Pilgrim*, LBP-06-23, 64 NRC at 299; *Vt. Yankee*, LBP-06-20, 64 NRC at 155-56.

151 *Pilgrim*, LBP-06-23, 64 NRC at 29 n.170.

152 *Pilgrim*, LBP-06-23, 64 NRC at 295 (*citing Turkey Point*, CLI-01-17, 54 NRC at 12); *see also id*. at 39-40 ("In [statements of the Commission in *Turkey Point*], the Commission has indicated that any new and significant information on matters designated as Category 1 issues in Part 51 may be initiated by petitioners only through means other than the submission of contentions."); *Vt. Yankee*, LBP-06-20, 64 NRC at 156-57; *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-14, 71 NRC 449, 475 (2010) (requiring petitioners challenging consideration of new and significant information pertaining to a Category 1 issue to seek a rulemaking or petition for waiver).

The *Pilgrim* and *Vermont Yankee* Boards next concluded that the Commission's decision in *Turkey Point* was "consistent with the regulatory history of 10 C.F.R. § 51.53(c)(3)(iv)."[153] They explained that Section 51.53(c)(3)(iv) was not originally part of the proposed rule.[154] Rather, the requirement that licensees consider new and significant information was added at the request of the Council on Environmental Quality ("CEQ") and Environmental Protection Agency ("EPA"), to ensure that the NRC could respond to new information about matters otherwise precluded from consideration in an ER by rule.[155]

When the Staff discussed the addition of Section 51.53(c)(3)(iv) in a memorandum to the Commission (SECY-93-032),[156] it specifically proposed that litigation of Category 1 environmental issues *would not be permitted, absent a waiver*.[157] This proposal was openly vetted during the deliberations of the modifications to Part 51 that were supported by the 1996 GEIS and the recommendations of SECY-93-032. Notably, one Commissioner twice asked whether a petitioner could litigate a Category 1 issue, under Section 51.53(c)(3)(iv) or any other regulation, on the claim that there was new and significant information on the issue.[158] And on both occasions, the NRC Deputy General Counsel responded that the claim could not be litigated

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153 *Pilgrim*, LBP-06-23, 64 NRC at 295; *see also Vt. Yankee*, LBP-06-20, 64 NRC at 157.

154 *Pilgrim*, LBP-06-23, 64 NRC at 295-96; *Vt. Yankee*, LBP-06-20, 64 NRC at 157.

155 *Pilgrim*, LBP-06-23, 64 NRC at 296; *Vt. Yankee*, LBP-06-20, 64 NRC at 157.

156 SECY-93-032, 10 CFR Part 51 Rulemaking on Environmental Review for Renewal of Nuclear Power Plant Operating Licenses (Feb. 9, 1993), *available at* ADAMS Accession No. ML072260444.

157 *Pilgrim*, LBP-06-23, 64 NRC at 296; *Vt. Yankee*, LBP-06-20, 64 NRC at 157-58. Specifically, as documented in SECY-93-032, the Staff assured the Commission that "[l]itigation of environmental issues in a hearing will be limited to unbounded category 2 and category 3 issues unless the rule is suspended or waived." SECY-93-032, at 4. (Although the Commission initially divided environmental issues into three categories for the Part 51 rulemaking, it ultimately combined proposed categories 2 and 3 into "Category 2." *See* Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. at 28,474.) In other words, the NRC distinguished between those issues that all license renewal applicants must address (*i.e.*, "unbounded" or Category 2 issues), and those issues that certain applicants need not address (i.e., "bounded" or Category 1 issues).

158 *Pilgrim*, LBP-06-23, 64 NRC at 296-98; *Vt. Yankee*, LBP-06-20, 64 NRC at 157-58.

unless the petitioner first obtained a waiver from the Commission.[159] It was with this understanding of the regulations that the Commission approved and finalized Section 51.53(c)(3)(iv).[160] The regulatory history of Part 51 thus unequivocally demonstrates that the Commission did not intend Section 51.53(c)(3)(iv) to allow petitioners to challenge issues precluded by rule from consideration in an ER, absent a waiver from the Commission.

Based on the foregoing considerations, both Boards determined that the Massachusetts AG's contention was inadmissible absent a waiver from the Commission.[161]

The Commission and the U.S. Court of Appeals for the First Circuit later affirmed the Boards' rulings that Section 51.53(c)(3)(iv) does not permit petitioners to challenge Category 1 issues in Section 51.53(c)(3)(i). After the Massachusetts AG appealed both determinations,[162] the Commission denied the appeals and affirmed the licensing boards' decisions and underlying reasoning.[163] On further appeal by the Massachusetts AG, the First Circuit upheld the decisions of both licensing boards and the Commission.[164] The First Circuit noted that NEPA permits the NRC to streamline the license renewal process via rulemakings.[165] The court further reasoned that prohibiting petitioners from challenging new and significant information pertaining to issues decided by rulemaking was permissible under NEPA, because the NRC has established "other means" to challenge those findings.[166] Specifically, individuals may petition for rulemaking,

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159 *Pilgrim*, LBP-06-23, 64 NRC at 297-98; *Vt. Yankee*, LBP-06-20, 64 NRC at 158-59.

160 *Pilgrim*, LBP-06-23, 64 NRC at 297-98; *Vt. Yankee*, LBP-06-20, 64 NRC at 158.

161 *Pilgrim*, LBP-06-23, 64 NRC at 298-99; *Vt. Yankee*, LBP-06-20, 64 NRC at 159.

162 *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-07-03, 65 NRC 13, 16 (2007).

163 *Id*.

164 *See Massachusetts*, 522 F.3d at 118.

165 *Id.* at 119.

166 *Id.* at 120.

comment on the Staff's draft EIS, or seek a waiver from the Commission.[167] The First Circuit relied on the settled NEPA principle that "[a]dministrative efficiency and consistency of decision are both furthered by a generic determination of [environmental] effects without needless repetition of the litigation in individual proceedings, which are subject to review by the Commission in any event."[168] The court concluded that denial of the Massachusetts AG's contention was "reasonable in context, and consistent with [NRC] rules."[169]

In summary, SAMA analyses required by Section 51.53(c)(3)(ii)(L) are generally Category 2 issues, but for the plants excluded from this requirement by the regulation—such as Limerick—SAMA analyses are Category 1 issues. The Commission has clearly and repeatedly held that contentions that challenge an applicant's consideration of new and significant information related to a Category 1 issue are inadmissible, absent a waiver.

And the same result must ensue, even setting aside the "Category" nomenclature. Given the construction of Section 51.53(c)(3), there is no basis to distinguish the Commission's holdings with respect to contentions based on Section 51.53(c)(3)(i), from contentions based on Section 51.53(c)(3)(ii). Both rules include limits to the "conditions and considerations" that a license renewal applicant must consider. And both are equally positioned with respect to Section 51.53(c)(3)(iv).[170] Thus, contentions challenging Section 51.53(c)(3)(ii) under the guise of

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[167] *See id.* at 120-21; *see also Turkey Point*, CLI-01-17, 54 NRC at 12.

[168] *Massachusetts*, 522 F.3d at 127 (*citing Balt. Gas & Elec. Co.*, 462 U.S. at 101, 103); *see also Vt. Yankee Nuclear Power Corp. v. Natural Res. Def. Council*, 435 U.S. 519, 535 n.13 (1978).

[169] *Massachusetts*, 522 F.3d at 127.

[170] *See Russello v. United States*, 464 U.S. 16, 22-23 (1983) (considering statutory structure an element of statutory interpretation); *Black & Decker Corp. v. Comm'r of Internal Revenue,* 986 F.2d 60, 65 (4th Cir. 1993) ("Regulations, like statutes, are interpreted according to canons of construction."); *Hart v. McLucas,* 535 F.2d 516, 519 (9th Cir. 1`976) ("constructions which render regulatory provisions superfluous are to be avoided") (*citing Jay v. Boyd,* 351 U.S. 345, 360 (1956) ("We must read the body of regulations ... so as to give effect, if possible, to all of its provisions.")).

Section 51.53(c)(3)(iv) are inadmissible absent a waiver from the Commission, which NRDC has not sought.

For the above reasons, Contention 1-E is inadmissible and must be dismissed.

2. Each of the Bases for Contention 1-E Also Fails to Raise a Genuine Dispute Over a Material Issue

Setting aside the fatal legal flaw of Contention 1-E, discussed above, the following paragraphs further show that none of the bases for Contention 1-E provides new and significant information that presents "a seriously different picture of the environmental impact of the proposed project from what was previously envisioned," or otherwise demonstrates that the evaluation in the Limerick ER is not "reasonable."[171] As a result, Contention 1-E fails to raise any genuine dispute of a material issue.

(a) *Contention 1-E Fails to Raise a Genuine Dispute Regarding Consideration of New Population Data*

As a basis for Contention 1-E, NRDC asserts that the Limerick ER "misinterprets and/or misuses new information regarding increased population in the area within [10 and 50] miles of the plant."[172] NRDC claims that the 1989 SAMDA analysis also underestimated this population.[173] In support of this Contention, NRDC's Declaration, offered by Matthew G. McKinzie, alleges that new information about this population could cause different results in a SAMA analysis for Limerick.[174]

To explain why this basis fails to raise a material issue, it is necessary to explain what NEPA requires. As a threshold matter, consideration of mitigation alternatives is a NEPA-

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171 *Callaway*, CLI-11-05, slip op. at 31 (*citing Hydro Resources*, CLI-99-22, 50 NRC at 14; *see also Marsh*, 490 U.S. at 373-74; *Froehlke*, 816 F.2d at 210.

172 Petition at 16-17.

173 *See id*.

174 Decl. ¶ 25.

derived requirement and is therefore governed by the NEPA "rule of reason."[175] In *Methow Valley*, the U.S. Supreme Court held that NEPA requires a "reasonably complete discussion of possible mitigation measures," but that there is no "substantive requirement that a complete mitigation plan be actually formulated and adopted."[176] As the *Methow Valley* Court further explained, NEPA is intended to "generate information and discussion on those consequences of greatest concern to the public and of greatest relevance to the agency's decision, rather than distorting the decisionmaking process by overemphasizing highly speculative harms."[177] Thus, "[u]nder NEPA, 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.'"[178] In the SAMA context, the Commission focuses on whether a license renewal applicant has provided a "reasonable consideration" of severe accident mitigation alternatives.[179]

For the reasons discussed in the following paragraphs, NRDC's assertions in Contention 1-E regarding population estimates in the Limerick SAMDA analysis and license renewal ER fail to raise a genuine dispute of a material issue. As a result, to the extent Contention 1-E alleges that the Limerick ER failed to adequately address new population data, the Contention is inadmissible under 10 C.F.R. § 2.309(f)(1)(vi).

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175 *McGuire/Catawba*, CLI-02-17, 56 NRC at 12 (*citing Vt. Yankee*, 435 U.S.at 551; *Citizens Against Burlington v. Busey*, 938 F.2d 190, 195 (D.C. Cir. 1991).

176 *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352 (l989); *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.").

177 *Methow Valley*, 490 U.S. at 356 (citation omitted); *see also Private Fuel Storage, L.L.C.* (Indep. Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 351 (2002) (stating that the Commission will not "transform NEPA analysis into a form of guesswork and distort NEPA's cost-benefit calculus").

178 *McGuire/Catawba*, CLI-03-17, 58 NRC at 431 (*quoting Methow Valley*, 490 U.S. at 352).

179 Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. at 28,481-82.

(i) Challenges to the 1989 SAMDA Analysis are Not Material to This Proceeding

As a basis for Contention 1-E, NRDC alleges that the 1989 SAMDA analysis for Limerick underestimated population growth within 50 miles of the plant.[180] But the 1989 SAMDA analysis is simply not at issue in this proceeding. As explained in the response to Contention 3-E, NRC rules do not require Exelon to make any showing with respect to the operating license SAMDA during license renewal, nor do they require the NRC to re-examine the previous Limerick SAMDA analysis. Any suggestion otherwise is a challenge to NRC rules.

Moreover, challenges to the 1989 SAMDA analysis are impermissibly late and cannot now form the basis of a litigable contention. The public had the opportunity to comment on the 1989 EIS when it was first issued by the NRC.[181] Conclusions drawn by the NRC Staff in the 1989 EIS do not remain open indefinitely as a mechanism for later intervention.[182]

For the above reasons, NRDC's claim in Contention 1-E that the 1989 Limerick SAMDA analysis underestimates population within 50 miles of the plant, fails to raise a genuine dispute because challenges to the 1989 SAMDA analysis are impermissibly late and not material to this proceeding.

(ii) NRDC's Projected Populations Do Not Constitute "Significant" Information

In support of Contention 1-E, NRDC also claims that current census data constitute "new" information that could produce a different outcome in a SAMA analysis, and that the Limerick ER incorrectly concludes that this information is not "significant."[183] Dr. McKinzie's

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[180] *See* Petition at 16-17; *see also* Decl. ¶¶ 22-24, 29.

[181] *See* 10 C.F.R. § 51.73.

[182] *See id.* § 2.309(b)-(c) (establishing timing limits for petitions to intervene); *see also id*. § 51.73 (providing that a request for comments on a draft EIS must include the date upon which the comment period closes).

[183] *See* Decl. ¶¶ 25-26.

Declaration bases this conclusion on further assertions that Exelon should have projected population through the end of the proposed renewal period (*i.e.*, 2049), and that Exelon incorrectly assumed a linear relationship between population and dose.[184] These assertions do not raise a genuine dispute for several reasons.

First, the ER addresses the new information identified by NRDC. In ER Section 5.3, Exelon acknowledges that current census data project higher population values than did the 1989 SAMDA analysis.[185] Exelon then describes how it evaluated this new information, including census projections for the year 2030, against the conclusion of the Limerick SAMDA analysis.[186] Thus, Contention 1-E fails to raise a genuine dispute regarding consideration of new population data because Exelon addresses new population data in the Limerick ER.

Second, population projections in the Limerick ER are consistent with NRC requirements. Dr. McKinzie's supporting Declaration claims that the Limerick ER should have projected population values beyond 2030, through the end of the period of the extended license (2049).[187] But Dr. McKinzie's Declaration contains no assertion as to why this "credibly could or would alter [Exelon's] SAMA analysis conclusions."[188] Nor does it cite any legal or technical support for its suggestion that population projections to the end of the license term are required.[189] This is because there are no such requirements.

Moreover, there are no census-based, government-sponsored projections available for the population around Limerick in 2049. Exelon used data only up to 2030 because at the time the

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184 *See id*. ¶¶ 27-28.

185 *See* ER at 5-4 to 5-9.

186 *See id.* at 5-7.

187 *See* Decl. ¶ 27.

188 *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-22, 72 NRC __, slip op. at 10 (Aug. 27, 2010).

189 *See* Decl. ¶¶ 27-30.

ER was prepared that was the farthest that the counties around Limerick project population had grown.[190] NRDC, on the other hand, estimated the population around Limerick in 2049 by simply assuming a linear projection of the growth rate between 1990 and 2010.[191] It provides no support for why this is reasonable under NEPA. Indeed, it is entirely speculative. And NEPA does not require speculation.[192] Contention 1-E therefore fails to raise a genuine dispute regarding consideration of new population data, because there is no legal requirement that the Limerick ER project population data beyond the year 2030.

Third, the 2030 population projected in the Limerick ER is more than 230,000 persons *higher* than that projected by NRDC. Dr. McKinzie's Declaration predicts population growth in the vicinity of Limerick for the purpose of demonstrating the underestimated population in the 1989 SAMDA analysis.[193] It projects a population within 50 miles of Limerick of 9,266,030 for the year 2030.[194] Dr. McKinzie fails to acknowledge, however, that the Limerick ER projects a higher population of 9,499,925 for the year 2030.[195] In other words, the Limerick ER is more conservative than NRDC, by over 230,000 people. If NRDC's assertion regarding 2030 population is correct, then the dose to the public would actually decrease from that projected in the ER.

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190 *See* ER at 5-7. NRDC cites to ERs for other license renewals which projected population out further than 2030. Decl. at ¶ 27. The fact that local population data projections were available for use by those applicants has no bearing on the fact that the counties around Limerick are unwilling to project their populations beyond 2030.

191 *See* Decl. ¶ 23.

192 *Vt. Yankee*, ALAB-919, 30 NRC at 44 (*citing Limerick Ecology Action*, 869 F.2d at 739).

193 *See* Decl. ¶¶ 23-24.

194 Decl. ¶ 24, tbl. 2.

195 ER at 5-7.

Fourth, NRDC's assertion that the relationship between population increase and dose is "not necessarily linear," is vague.[196] In support of Contention 1-E, Dr. McKinzie's Declaration challenged Exelon's analysis of new population data in the Limerick ER on the basis that it assumed a linear relationship between population and dose.[197] But his Declaration stated merely, "the relationship between population surrounding a reactor and the estimated dose from a severe accident is *not necessarily* linear."[198] NRDC relies on "what amounts to generalized suspicions,"[199] rather than facts and reasoned statements of why the application is unacceptable in some material respect.[200] Because NRDC challenges merely that Exelon's assumptions regarding population and dose are "not necessarily" correct, Contention 1-E fails to raise a genuine dispute of a material issue.

For the reasons listed above, NRDC's assertions regarding population increase fail to raise a genuine dispute over an issue that is material to this proceeding. This aspect of Contention 1-E must be dismissed accordingly.

(iii) Exelon Does Not Need to Consider Uncertainty in Dose Resulting from Population Estimates

NRDC's final assertion with respect to consideration of population data is the claim that "the 1984 FES, 1989 FES Supplement, the 2011 License Renewal Application and its [ER] do not discuss or analyze uncertainty in offsite dose calculations for Limerick related to census undercount or to transient populations."[201] As explained above, challenges to the NEPA analysis

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196 Decl. ¶ 28.

197 *See id*.

198 *Id.* (emphasis added).

199 *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 & 2; Catawba Nuclear Station, Units 1 & 6), CLI-03-17, 58 NRC 419, 424 (2003).

200 *See Seabrook*, ALAB-942, 32 NRC at 428; *see also Turkey Point*, LBP-90-16, 31 NRC at 521 & n.12; 10 C.F.R. § 2.309(f)(i).

201 Decl. ¶ 30.

for the Limerick *operating license* are untimely and inadmissible in this proceeding.[202] A challenge to the 2011 ER is also inadmissible, to the extent it suggests that the applicant must undertake more analysis than is required by NEPA or the NRC implementing regulations.

NRDC's assertion that Exelon must conduct uncertainty estimates to account for possible undercount of minority populations and transient populations in census data is inconsistent with the NEPA "rule of reason."[203] Under that standard, an EIS need contain only a "reasonably thorough discussion of the significant aspects of the *probable* environmental consequences" of a proposed action.[204] Likewise, SAMA analyses need not rely on "worst case" assumptions.[205] The consideration sought by NRDC—evaluation of potential methodological errors in government census data, or *maximum* population of tourists and commuters—is requesting either that Exelon precisely predict population or consider a "worst case" scenario. Neither analysis is required under NEPA as a matter of law.

Moreover, NRDC's assertion is similar to one rejected by the licensing board in the operating license proceeding for *Watts Bar, Unit 2*.[206] Like the petitioner in *Watts Bar*, NRDC cites no regulation that requires, nor NRC guidance that recommends, that applicants conduct uncertainty analyses related to population calculations.[207] There are none. Indeed, the guidance that NRDC argues applies to Limerick states that predicted population distributions "may be

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202 *See* discussion *infra* Section V.B.1.

203 *McGuire/Catawba*, CLI-02-17, 56 NRC at 12 (*citing Vermont Yankee*, 435 U.S. at 551; *Burlington*, 938 F.2d at 195).

204 *Ctr. for Biological Diversity v. U.S. Forest Serv.*, 349 F.3d 1157, 1166 (9th Cir. 2003) (emphasis added).

205 *See Methow Valley*, 490 U.S. at 354-56 & n.17 (*citing* NEPA Regulations, Proposed Rules, 50 Fed. Reg. 32, 234, 32,236 (Aug. 9, 1985) ("the [previous rule requiring a "worst case analysis"] has proved counterproductive, because it has led to agencies being required to devote substantial time and resources to preparation of analyses which are not considered useful to decisionmakers and divert the EIS process from its intended purpose")).

206 *See Tenn. Valley Auth.* (Watts Bar Unit 2), LBP-09-26, 70 NRC 939, 960-72 (2009), *aff'd on other grounds*, CLI-10-12, 71 NRC 319.

207 *See id*. at 963-64.

obtained by extrapolating publicly available census data."[208] As NRDC acknowledges, that is what Exelon has done.[209] There simply is no requirement or recommendation to further evaluate that census data using the uncertainty analysis sought by NRDC.[210] Because the uncertainty analysis sought by NRDC is not even that which NRC-approved guidance for new SAMA analyses *recommends*, this Contention fails to raise a material issue, much less satisfy NEPA's rule of reason.

In sum, because NEPA requires only "reasonable" estimates, such as census-based population projections obtained from state population data centers, the uncertainty calculations sought by NRDC are neither required by rule nor material to this proceeding. For the reasons outlined above, NRDC's challenge to the consideration of new population data in the Limerick ER fails to raise a genuine dispute over a material issue. This basis for Contention 1-E must therefore be rejected under Section 2.309(f)(1)(vi).

(b) *Exelon Need Not Consider "New" Accident Scenarios and Mitigation Alternatives*

As the next basis for Contention 1-E, NRDC alleges that the Limerick ER fails to consider (1) mitigation alternatives developed since the 1989 SAMDA analysis, as well as (2) "additional plausible severe accident scenarios."[211] As a threshold matter, NRDC's assertion constitutes an impermissible challenge to NRC regulations.

In support of the assertion that the Limerick ER fails to consider mitigation alternatives developed since the 1989 SAMDA analysis, NRDC offers the Declaration of Dr. McKenzie and Christopher J. Weaver, which cites the number of mitigation alternative candidates considered by

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208 NEI 05-01, at 13.

209 *See* Decl. ¶¶ 25, 27, 30; *see also* ER at 5-8.

210 *See* NEI 05-01, § 8.

211 Petition at 17.

other license renewal applicants.[212] Notably, however, none of these applicants was excused under Section 51.53(c)(3)(ii)(L) from conducting a SAMA analysis. As a result, the cited alternatives are not germane to this proceeding, and the comparison fails from its point of inception.

NRDC's assertion is also inconsistent with the NEPA "rule of reason." It is well established that NEPA requires an agency to consider only those alternatives that are available at the time of its evaluation.[213] The NRC's "duty under NEPA is to study all alternatives that appear reasonable and appropriate for study at the time of drafting the EIS."[214] NRDC's claim that Exelon must evaluate mitigation alternatives developed *after* the Staff drafted the Limerick EIS is not reasonable under NEPA.

For its claim that the Limerick ER should have considered additional accident scenarios, NRDC's Declaration of Dr. Weaver lists accident scenarios related to the March 2011 accident at Fukushima and cites statements in the NRC Staff's *The Near-Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident* ("Fukushima Task Force Report")[215] that the NRC should reevaluate its generic determinations regarding these scenarios.[216]

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212 *See* Decl. ¶¶ 9-15.

213 *See Vt. Yankee*, 435 U.S. at 553 (requiring a licensing board's consideration of alternatives to be "judged by the information then available to it"); *see also Seacoast Anti-Pollution League v. NRC*, 598 F.2d 1221, 1230 (1st Cir. 1979) (holding that an agency must consider alternatives that appear reasonable "at the time" of the NEPA review); *Carolina Envtl. Study Group v. U.S. AEC*, 510 F.2d 796, 801 (D.C. Cir. 1975) ("we view NEPA's requirement as one of considering alternatives as they exist and are likely to exist"); *Natural Ress Def. Council, Inc. v. Morton*, 458 F.2d 827, 840 (D.C. Cir. 1972) (MacKinnon, J., concurring) ("It is my view that the range of alternatives that must be discussed in an Impact Statement is generally limited to realistic alternatives that will be reasonably available within the time the 'decisionmaking' official intends to act.").

214 *Roosevelt Campobello Int'l Park Comm'n v. EPA*, 684 F.2d 1041, 1047 (1st Cir. 1982) (internal quotations omitted).

215 July 12, 2011, *available at* ADAMS Accession No. ML112510271.

216 Decl. ¶ 16.

The assertion in Contention 1-E that the Limerick ER must consider the Fukushima accident scenarios due to the findings in the NRC's Fukushima Task Force Report is in error. The Commission recently held that the Staff's report on Fukushima does not constitute "new and significant" information.[217] The Commission explained that although the NRC Staff included in the Fukushima Task Force Report 12 recommendations to improve the safety of operating reactors, "the Task Force also stated that 'continued operation and continued licensing activities do not pose an imminent risk to public health and safety.'"[218] The Commission explained:

> Although the Task Force completed its review and provided its recommendations to us, the agency continues to evaluate the accident and its implications for U.S. facilities and the full picture of what happened at Fukushima is still far from clear. In short, we do not know today the full implications of the Japan events for U.S. facilities. Therefore, any generic NEPA duty—if one were appropriate at all—does not accrue now.[219]

The Commission further explained that "new and significant information" must present "a seriously different picture of the environmental impact of the proposed project from what was previously envisioned."[220] The Commission concluded, with respect to the Fukushima incident and the findings of the Fukushima Task Force Report, "[t]hat is not the case here, given the

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[217] *Callaway*, CLI-11-05, slip op. at 30-31. Licensing Boards have followed the Commission, also rejecting contentions that rely on the Task Force Report as "new and significant information." *See Tenn. Valley Auth.* (Bellefonte Nuclear Power Plant Units 3 & 4), LBP-11-37, 74 NRC at __, slip op. at 8-11 (Nov. 30, 2011); *FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), LBP-11-34, 74 NRC at __, slip op. at 12-15 (Nov. 23, 2011); *Fla. Power & Light Co.* (Turkey Point Units 6 & 7), LBP-11-33, 74 NRC __, slip op. at 8 (Nov. 21, 2011); *Pac. Gas & Elec. Co.* (Diablo Canyon Nuclear Power Plant, Units 1 & 2), LBP-11-32, 74 NRC at __, slip op. at 18-19 (Nov. 18, 2011); *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), LBP-11-28, 74 NRC at __, slip op. at 5-9 (Oct. 19, 2011); *PPL Bell Bend, L.L.C.* (Bell Bend Nuclear Power Plant), LBP-11-27, 74 NRC at __, slip op. at 10-15 (Oct. 18, 2011).

[218] *Callaway*, CLI-11-05, slip op. at 5 (*citing* Fukushima Task Force Report at vii).

[219] *Id*. at 30.

[220] *Id*. at 31 (*citing Hydro Res.*, CLI-99-22, 50 NRC at 14; *Marsh*, 490 U.S. at 373; *Froehlke*, 816 F.2d at 210).

current state of information available to us."[221] This Board must join the litany of other licensing boards that have followed the Commission's determination and dismissed contentions that allege that the Fukushima Task Force Report raises new and significant information.[222]

In short, NRDC's challenge fails to raise a genuine dispute over any issue that is material to the outcome of the proceeding. Although NRDC alleges that the Limerick ER does not consider certain mitigation alternatives, those alternatives were developed after the Staff had completed the only SAMA analysis it is required to conduct for Limerick. And although NRDC alleges that the Limerick ER does not consider accident scenarios related to Fukushima, the Commission has determined that those scenarios are not "new and significant information." This basis for Contention 1-E, therefore, must be dismissed under Section 2.309(f)(1)(vi).

(c) ***NRDC's Calculation of Core Damage Frequency is Unfounded***

NRDC next bases Contention 1-E on the assertion that the Limerick ER ignores new and significant information regarding core damage frequency ("CDF") data.[223] As an initial matter, this basis for Contention 1-E suffers from the same errors that render the previous bases inadmissible. Specifically, to the extent Contention 1-E alleges that the CDF in the 1989 SAMDA analysis is "non-conservative," this Contention is impermissibly late and outside the scope of this proceeding. And to the extent Contention 1-E alleges that the Limerick ER "ignores new and significant information," the Contention is factually flawed because the Limerick ER includes new CDF data, incorporated in the Limerick probabilistic risk assessment ("PRA") model through 2009.[224] Even despite these fatal flaws, for the reasons discussed in the

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[221] *Id*.

[222] *See Bellefonte*, LBP-11-37, slip op. at 8-11); *Bell Bend*, LBP-11-27, slip op. at 10-15; *Seabrook*, LBP-11-28, slip op. at 5-9; *Diablo Canyon*, LBP-11-32, slip op. at 18-19; *Turkey Point*, LBP-11-33, slip op. at 8.

following paragraphs, this basis for Contention 1-E fails to raise a genuine dispute of a material issue of law or fact.

In support of this basis for Contention 1-E, NRDC's Declaration of Thomas B. Cochran explains that the 1989 SAMDA analysis and 2011 Limerick ER rely on plant-specific CDF data analyzed in a PRA that is based on modeling assumptions – suggesting this is a deficiency.[225] NRDC next conducts its own informal, generic calculation of CDF based on core damage events that have occurred at *all light water reactors around the world*.[226] NRDC concludes that this global CDF is higher than that calculated for Limerick, and that if this larger value were used for Limerick, additional SAMAs might become cost beneficial.[227]

NRDC's assertion plainly fails to raise a genuine dispute. Exelon agrees with Dr. Cochran that the Limerick PRA uses modeling assumptions and calculates CDF based on site-specific data. Exelon also agrees that Dr. Cochran's informal calculation predicts a higher CDF than does the Limerick ER, and that using the higher CDF in a SAMA analysis might possibly increase the economic viability of some SAMAs. But the Commission has already noted that CDF values supporting a SAMA analysis are supposed to be calculated using site-specific data: "[t]he SAMA analysis is a *site specific mitigation analysis*."[228] CDF values can be calculated

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223 *See* Petition at 18.

224 *See* ER at 5-5 ("Since its inception, the [Limerick] PRA model has been regularly updated to reflect as-built and as-operated conditions. The current [Limerick] PRA model was reviewed to identify new information relative to the quantification of risk (measured in core damage events per year) in comparison to information provided in the Supplement to NUREG-0974 [1989 EIS].").

225 *See* Decl. ¶ 18.

226 *See id.* ¶ 19.

227 Decl. ¶ 20.

228 *Pilgrim*, CLI-10-11, 71 NRC at 316 (emphasis added); *see also* Regulatory Guide 1.200, An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities, Rev. 1, at 9 (Jan. 2007) (explaining that for a technically acceptable probabilistic risk assessment ("PRA"), the PRA must include quantification that "provides an estimation of the CDF given the design, operation, and maintenance *of the plant*.") (emphasis added).

using input from different types of reactors, with different types of containments, in different geographical locations, operated by different licensees subject to different regulations (*i.e.*, in different countries), but the resulting values are not useful for site-specific decision-making. NRDC admits as much, noting "[w]e do not argue that any of the [Declaration's] CDF estimates based on the historical evidence represent the most accurate CDFs for Limerick Units 1 and 2."[229]

NRDC provides absolutely no basis to explain why the CDF estimates cited for other reactors are applicable to Limerick.[230] NRDC makes only vague, unsupported, conclusory statements, such as: "The Limerick reactors, BWRs with Mark 2 containments, are similar in many respects to Fukushima Daiichi Units 1, 2 and 3, BWRs with Mark 1 containments."[231] NRDC leaves it up to the reader to guess the similarities. The Commission has repeatedly held that "bare assertions are insufficient to support a contention."[232] Contentions, like this one, based on nothing more than unspecified information and unsupported belief, are insufficient under the Commission's admissibility standards for intervention.[233]

Although the Limerick PRA is based on plant-specific configurations and procedures, NRDC's proposed CDF calculation ignores the Limerick-specific design. NRDC suggests that a CDF that it calculates from events involving Three Mile Island ("TMI") Unit 2, which is a PWR; Greifswald-5, a VVER with no containment; and Fukushima Dai-Ichi, BWRs with a Mark I

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229 Decl. ¶ 21.

230 *See id.* ¶¶ 19-21.

231 *Id.* ¶ 19.

232 *Diablo Canyon*, CLI-11-11, slip op. at 34 n.139 (*citing Crow Butte Res., Inc.* (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 562, 573 (2009)); *see also Fansteel*, CLI-03-13, 58 NRC at 203; *Oyster Creek*, CLI-00-6, 51 NRC at 208.

233 *See USEC*, CLI-06-10, 63 NRC at 472; *N. Atl. Energy Serv. Corp.* (Seabrook Station, Unit 1), CLI-99-6, 49 NRC 201, 219 (1999).

containment, would be more appropriate for Limerick.[234] Had NRDC chosen a population of plants with designs similar to Limerick, however, NRDC would have calculated a CDF of 0.0, because there have been no core damage events in all the years of operation of BWRs with Mark II containment. The CDF for Limerick is, of course, higher than zero, but this demonstrates the inappropriate nature of NRDC's approach.

For these reasons, NRDC's assertion in Contention 1-E that the Limerick ER failed to consider actual core damage events fails to raise a genuine dispute over a material issue. This basis is therefore inadmissible under 10 C.F.R. § 2.309(f)(1)(vi).

(d) ***NRDC's Economic Cost Argument Does Not Raise a Genuine Dispute***

NRDC next asserts that the 1989 SAMDA analysis failed to properly account for economic cost risks, and that the Limerick ER erroneously relies on economic data from TMI.[235] NRDC's Declaration of Dr. McKinzie provides several reasons why the reliance on TMI data is flawed.[236] Yet none of NRDC's reasons raises a genuine dispute regarding a material issue of law or fact.

Dr. McKinzie's Declaration explains that the 1989 SAMDA analysis for Limerick "did not compute cost-benefit values for SAMDA candidates with respect to their reduction in land contamination . . . or the reduction in associated economic cost, from a severe accident."[237] The Declaration goes on to explain that these "[e]conomic cost risk calculations are now a codified component of SAMA cost-benefit assessments and have been performed as an integral

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234 *See* Decl. ¶ 19; *see also Decommissioning Nuclear Facilities*, World Nuclear Ass'n (July 2011), http://www.world-nuclear.org/info/inf19.html.

235 *See* Petition at 18.

236 *See* Decl. ¶¶ 31-39.

237 Decl. ¶ 31.

part of other License Renewal Applications submitted to the NRC."[238] NRDC contends that economic cost information, including clean up costs, may produce a different outcome in the SAMA assessment for Limerick.[239]

First, as explained in the response to Contention 3-E above, Exelon is not legally obligated to conduct another SAMA analysis that would be subject to current industry guidance. Thus, this aspect of Contention 1-E raises an issue that is plainly not material to a finding the NRC must make for Limerick license renewal.

Second, Exelon did evaluate whether off-site economic cost risks qualified as new and significant information.[240] Exelon determined that economic cost risk could be represented as a percentage of offsite exposure cost risk, and it therefore turned to TMI Unit 1, a plant that also is located in Pennsylvania, to obtain a value for that ratio of about 70%.[241] Using that percentage, Exelon calculated the effect of off-site economic cost risk and determined that it did not qualify as new and significant information.[242]

Dr. McKenzie appears to support Exelon's analysis, because he demonstrates that a value of 70% is reasonable, when compared to other plants. By way of explanation, NRDC claims the ratio of economic cost risk to exposure cost risk "exhibits a wide variation," and that Exelon should have used a number higher than 70%.[243] For support, Dr. McKenzie provides economic cost data for nine reactor units, including TMI, with values ranging from -16.0% to 238.4%.[244] But the median percentage is 63.9%, with only two reactor units with a greater percentage than

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238 *Id.* (emphasis added).

239 *See* Decl. ¶¶ 31-39.

240 *See* ER at 5-4 to 5-7, 5-8.

241 *Id.* at 5-8. The actual cost risk is 72.1%, but was rounded to 70%. *See, e.g.*, Decl. ¶ 34, tbl. 3.

242 *See* ER at 5-8.

243 Decl. ¶ 33.

244 *Id.* ¶ 34, tbl. 3.

TMI (72.1%): Nine Mile Point Unit 1 (91.1%) and Hope Creek (238.4%).[245] In other words, for six of the nine plants referenced by NRDC, economic cost risks represented a *lower* percentage of exposure cost risks than Exelon assumed in the Limerick ER.

Exelon does not dispute that the ratio of economic cost risk to exposure cost risk may vary between plants. But NEPA requires only "reasonable," not "worst case" analyses.[246] Likewise, the Commission has held that SAMA analyses also are not worst case analyses.[247] Dr. McKenzie's data support a conclusion that the TMI value for the ratio of economic cost risk to exposure cost risk is "reasonable," and thus consistent with NEPA requirements.

Accordingly, this aspect of Contention 1-E must be dismissed under Section 2.309(f)(1)(iv).

(e) ***NRDC's Argument Regarding Impacts to the Human Environment is Vague and Unsupported***

NRDC's last basis in support of Contention 1-E is the following:

> The ER fails to include an analysis of the impacts to the quality of the human environment that were not discussed in the ER, for example, loss of family homestead, possessions, abandonment of livestock and domestic animals, pain and suffering, including that associated with loss of one's job or possessions, and uncertainties associated with the safety of the food supply.[248]

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[245] *Id.*

[246] *See Methow Valley*, 490 U.S. at 354-56 & n.17 (*citing* NEPA Regulations, Proposed Rules, 50 Fed. Reg. at 32,236 ("the [previous rule requiring a "worst case analysis"] has proved counterproductive, because it has led to agencies being required to devote substantial time and resources to preparation of analyses which are not considered useful to decisionmakers and divert the EIS process from its intended purpose")); *Private Fuel Storage*, CLI-02-25, 56 NRC at 347 ("The purpose of an EIS is to inform the decisionmaking agency and the public of a broad range of environmental impacts that will result, with a fair degree of likelihood, from a proposed project, rather than to speculate about 'worst-case' scenarios and how to prevent them."), *id*. at 348-349 ("It is well established that NEPA requires only a discussion of 'reasonably foreseeable' impacts. Grappling with this concept, various courts have described it as a 'rule of reason,' or 'rule of reasonableness,' which excludes 'remote and speculative' impacts or 'worst-case' scenarios.") (citations omitted).

[247] *Pilgrim*, CLI-10-11, 71 NRC at 316-17 ("As a mitigation analysis, NRC SAMA analysis is neither a worst-case nor a best-case impacts analysis.").

[248] Petition at 19.

This is all that NRDC says on this subject.[249] NRDC provides no legal or technical support.[250] The Declarations attached to the Petition are silent on these issues.[251] Moreover, this basis is entirely unrelated to the remainder of Contention 1-E and to the Petition generally.

A contention may not rest on such "bare assertions and speculation."[252] The Commission has held that such "notice pleading," based on nothing more than unspecified information and unsupported belief, is insufficient for a petition to intervene.[253] Because this basis is impermissibly vague and unsupported, it is inadmissible under Section 2.309(f)(1)(i), (ii), and (v).

In sum, because Contention 1-E disputes Exelon's consideration of "new and significant" information pertaining to issues that the Limerick ER need not consider *by rule*, Contention 1-E is inadmissible absent a waiver from the Commission. NRDC has not sought a waiver. Moreover, each of the bases NRDC advances in support of Contention 1-E fails to raise a genuine dispute over an issue that is material to this proceeding. Accordingly, the Board must deny admission of Contention 1-E for failure to meet 10 C.F.R. § 2.309(f)(1).

D. Contention 2-E is Not Admissible

Contention 2-E alleges that Exelon's SAMDA analysis relies on inadequate and outdated data and methodologies, and as a result, the Limerick ER "fails to provide a reliable basis for the conclusion that there are no cost-beneficial SAMAs."[254] Contention 2-E specifically alleges that Exelon's ER improperly relies on:

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249 *See id*.

250 *See id*.

251 *See generally* Declaration.

252 *Fansteel*, CLI-03-13, 58 NRC at 203 (*citing Oyster Creek*, CLI-00-6, 51 NRC at 208).

253 *Seabrook*, CLI-99-6, 49 NRC at 219.

254 Petition at 21.

(1) "limited and outdated" list of candidate alternatives;[255]
(2) "inaccurate" population analyses;[256]
(3) "inadequate and outdated" meteorological data;[257]
(4) "inaccurate" estimate of CDF;[258]
(5) "inaccurate" analysis of evacuation time;[259] and
(6) "no analysis" of economic impact.[260]

Contention 2-E asserts that as a result of these deficiencies, the Limerick ER does not comply with 10 C.F.R. §§ 51.45, 51.53(c)(2), and 51.53(c)(3)(iii).[261]

The three regulations cited by NRDC pertain to NRC requirements to conduct an ER that includes consideration of alternatives. Specifically, Section 51.45 requires that applicants prepare an environmental report that satisfies the requirements, among others, of Section 51.53. Section 51.53(c)(2) requires that the ER for license renewal address any modifications that impact the environment and alternatives to those impacts. Section 51.53(c)(3)(iii) requires license renewal applicants to include in the ER consideration of alternatives for reducing adverse impacts of Category 2 issues. Although these three regulations require license renewal applicants to provide in their ER an analysis of alternatives to adverse environmental impacts resulting from license renewal, none of the three regulations trumps the provision set forth in Section 51.53(c)(3)(ii)(L), which excludes Limerick from the requirement to conduct additional SAMA analyses. In other words, to the extent the three regulations cited by NRDC require

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255 *Id.* at 19-20 (Basis 1).

256 *Id.* at 20 (Basis 2).

257 *Id.* (Basis 3).

258 *Id.* (Basis 4).

259 *Id.* (Basis 5).

260 *Id.* at 20-21 (Basis 6).

261 *Id.* at 19.

Exelon to consider alternatives in the Limerick ER, none requires Exelon to consider SAMAs, which are the stated subject of this Contention.

Apart from the reference to these three regulations, Contention 2-E is almost entirely redundant of Contentions 3-E and 1-E.

Accordingly, to the extent this Contention challenges the adequacy of the 1989 SAMDA analysis or asserts that Exelon should have conducted *another* SAMA analysis, this Contention raises issues outside the scope of this proceeding and constitutes an impermissible challenge to Section 51.53(c)(3)(ii)(L), as described in the response to Contention 3-E, above. Exelon incorporates by reference its response in Section V.B accordingly.

To the extent Contention 2-E challenges consideration of "new and significant" information regarding SAMAs in the Limerick ER, Commission precedent requires that this proposed contention be dismissed, as discussed in the response to Contention 1-E, above. Exelon incorporates by reference its response in Section V.C.1 accordingly.

And to the extent Contention 2-E alleges that the Limerick ER improperly fails to consider certain "new and significant" information also raised in Contention 1-E, this proposed contention also fails to proffer a genuine dispute over a material issue, as described in the response to Contention 1-E, above. Exelon incorporates by reference its response in Section V.C.2 accordingly. The remaining bases upon which NRDC alleges the Limerick ER is deficient are also not admissible, as demonstrated below.

1. The Board Has Five Reasons to Reject NRDC's Meteorological Data Argument

In support of Contention 2-E, NRDC claims that Exelon relies on "inadequate and outdated" meteorological data, and its conclusions regarding SAMAs are therefore not

reliable.[262] NRDC's supporting Declaration of Dr. McKinzie takes issue with Exelon's continued reliance on meteorological data from 1976.[263] NRDC states that other SAMA analyses used information current to the licensing period, and screened those data to determine whether they are characteristic of the site.[264] His Declaration also includes analysis of meteorological data in the Limerick area from 1999 and 2010, and concludes that the meteorology of these two years "differs significantly."[265] Finally, Dr. McKinzie's Declaration cites the prediction in one study that the climate in Pennsylvania in the middle of this century may be warmer and wetter than it is now.[266] These speculative predictions fail to raise a genuine dispute of a material issue for multiple reasons.

First, as discussed throughout this Answer, to the extent Contention 2-E challenges the 1989 SAMDA analysis, the challenge is impermissibly late and beyond the scope of this proceeding.[267]

Second, NRDC's conclusion that other SAMA analyses use more current data fails to raise a genuine dispute over a material issue. As discussed in Section V.B above, Exelon is not required to conduct another SAMA analysis for Limerick.[268] As such, the practices of other licensees that are only now conducting their *first* SAMA analysis are simply not material here.[269]

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[262] *Id.* at 20.

[263] *See* Decl. ¶ 45.

[264] *Id*.

[265] *Id.* ¶ 46.

[266] *Id.* ¶ 47.

[267] *See* discussion *supra* Sections V.B. to V.C.

[268] *See* discussion *supra* Section V.B.

[269] *See* discussion *supra* Section V.C.

Third, NRDC has not and cannot establish that there is any legal requirement that licensees use current meteorological data for SAMA analyses.[270] There is no legal requirement. And guidance—which is not binding—recommends that licensees describe the meteorological data used in the SAMA analysis and "[e]xplain why the data set and data period are representative and typical."[271]

Fourth, although NRDC suggests that Exelon must now demonstrate in the license renewal ER that the 1976 meteorological data are characteristic of the site, NRDC's own declarants acknowledge that the 1976 meteorological data used by Exelon *are representative of 2010 conditions*.[272] Plainly, there is no material dispute on this aspect of the Contention, if the meteorological data from 1976 are acknowledged as representative of 2010 data.[273]

Finally, the analysis of potential future climate change sought by NRDC is not required by NEPA. As explained in the response to Contention 1-E, licensing boards have long understood the NEPA "rule of reason" to mean that an "agency's environmental review, rather than addressing every impact that could possibly result, need only account for those that have some likelihood of occurring or are reasonably foreseeable."[274] Consideration of "remote and speculative" impacts is not required.[275] In asking this Licensing Board to admit Contention 2-E

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[270] *See* Petition at 20; Decl. ¶¶ 45-48.

[271] *See* NEI 05-01, at 15.

[272] Decl. ¶ 46 ("in 2010 the winds are dominated by north-northwesterly, northwesterly and westerly winds, which is a pattern more like the 1976 data used for the Limerick SAMDA analysis").

[273] *See Comanche Peak*, LBP-92-37, 36 NRC at 384 (holding that a contention that does not directly controvert a position taken by the applicant in the application is subject to dismissal).

[274] *LES*, LBP-06-8, 63 NRC at 258-59 (*citing Long Island Lighting Co.* (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 836 (1973)); *see also 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).

[275] *Vt. Yankee*, ALAB-919, 30 NRC at 44 (*citing Limerick Ecology Action*, 869 F.2d at 739); *see also La. Energy Servs. L.P.* (Nat'l Enrichment Facility), CLI-05-20, 62 NRC 523, 536 (2005) ("NEPA also does not call for certainty or precision, but an *estimate* of anticipated (not unduly speculative) impacts."); *Scientists' Inst. for Pub. Info., Inc. v. AEC*, 481 F.2d 1079, 1092 (D.C. Cir. 1973) (holding that when faced with uncertainty, NEPA only requires "reasonable forecasting."). Predicting climate change effects can be exactly the type of

on the basis of speculation regarding the possible impacts of future climate change, NRDC goes beyond the bounds of NEPA. Accordingly, this aspect of the Contention also is not material to this proceeding.

In view of the above, it is clear that this aspect of Contention 2-E must be dismissed, because NRDC has failed to raise a genuine dispute over a material issue of law or fact, as required by 10 C.F.R. § 2.309(f)(1)(vi).

2. NRDC Cannot Challenge Evacuation Time Estimates in this Proceeding

NRDC also raises, as a basis for Contention 2-E, the assertion that the 1989 SAMDA analysis is unreliable because the Limerick ER uses "inaccurate analyses of the evacuation time" required for a severe accident.[276] In support of that assertion, NRDC's supporting Declaration of Christopher J. Weaver compared the evacuation speed used in the 1984 Limerick ER with evacuation speeds given in SAMA analyses for other plants, developed years after the Limerick SAMDA analysis.[277]

The challenge in Contention 2-E to evacuation times used in the Limerick ER fails to raise a genuine dispute over a material issue. Again, challenges to the 1989 SAMDA analysis are impermissibly late and beyond the scope of this proceeding.[278] And NRDC's comparison to evacuation times used by applicants only now conducting their first SAMA analyses is not material because Exelon is not required to conduct another SAMA analysis for Limerick. To the

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"speculative effects" that are not required under NEPA. *See* CEQ Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions at 2 (Feb. 18, 2010), *available at* ADAMS Accession No. ML103510433 ("With regards to the effects of climate change on the design of a proposed action and alternatives . . . agencies should recognize the scientific limits of their ability to accurately predict climate change effects, especially of a short-term nature, and not devote effort to analyzing wholly speculative effects.") (citation omitted).

276 Petition at 20.

277 *See* Decl. ¶¶ 42-43.

278 *See* discussion *supra* Section V.B.1. To the extent this is a challenge to the Emergency Plan for Limerick, it also is not admissible. *See Turkey Point*, CLI-01-17, 54 NRC at 9.

extent Contention 2-E challenges Exelon's analysis of "new and significant information," the contention is impermissible absent a waiver.[279] NRDC's challenge to the evacuation times used in the 1989 SAMDA analysis therefore does not raise issues that are material to this proceeding. 10 C.F.R. § 2.309(f)(1)(iii), (iv), and (vi) thus require that Contention 2-E be dismissed.

In sum, this Board must deny Contention 2-E because it fails to meet the admissibility requirements of 10 C.F.R. § 2.309(f)(1). In large part, this contention is redundant of Contentions 3-E and 1-E. Like Contention 3-E, this contention challenges Section 51.53(c)(3)(ii)(L), which does not require Limerick to conduct *another* SAMA analysis. This contention is therefore barred from admission by 10 C.F.R. § 2.309(f)(1)(iii). Like Contention 1-E, this contention challenges consideration of "new and significant information" related to SAMA analyses, which is impermissible without a waiver. Even absent that precedent, to the extent this contention is redundant of Contention 1-E, it also fails to raise any genuine dispute over a material issue. And the two bases that are unique to this contention likewise fail to raise a genuine dispute over a material issue. This contention is therefore barred from admission by 10 C.F.R. § 2.309(f)(1)(iv) and (vi).

E. Contention 4-E is Not Admissible

Contention 4-E asserts:

> [Exelon's ER] (§7.2) fails to adequately consider the No Action alternative in violation of 10 C .F.R. §§51.45(c), 51.53(c)(2) and 51.53(c)(iii).[280]

Although the proposed contention uses the language "fails to adequately consider," which could suggest that this is a contention challenging the adequacy of an existing discussion in the ER,

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[279] *See* discussion *supra* Section V.C.1.

[280] Petition at 23.

NRDC unambiguously characterizes Contention 4-E as a "contention of omission."[281] This is an important distinction because, as explained below, a contention of omission is not admissible if the very information that NRDC alleges is missing is, in fact, not missing – as is the case here.

The contention is supported by the Declaration of Christopher E. Paine ("Paine Declaration"), who is the Director of NRDC's Nuclear Program.[282] Mr. Paine cites no case law or regulation to support his NEPA arguments.[283] Although the Petition cites to three NRC regulations, it cites to no case law supporting its NEPA arguments.[284] Likewise, although the Petition cites to ER Section 7.1 (*i.e.*, the No-Action alternative discussion), it does not cite to any other sections of the ER, even though several sections are cross-referenced in ER Section 7.1.

NRDC's specific complaint about Exelon's No-Action alternative analysis is that it is allegedly limited to: (1) decommissioning impacts; and (2) power generation alternatives that would replace the generating capacity of Limerick.[285] NRDC asserts that the No-Action alternative "does not involve consideration of alternatives that would 'equivalently satisfy the purpose and need for the proposed action'" and thus, the No-Action analysis cannot be limited to replacing the generating capacity of Limerick.[286] NRDC argues that Exelon should have considered the "reasonably foreseeable portfolio of PJM [Interconnection LLC ("PJM")] system resources," including renewable energy sources and demand-side management ("DSM"), that would be available in 2024 and 2029, when the operating licenses for Units 1 and 2 expire,

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281 *Id.* at 31.

282 Declaration of Christopher E. Paine of the Natural Resources Defense Council (Nov. 11, 2011), *available at* ADAMS Accession No. ML11326A322.

283 *See id.* ¶¶ 4-12.

284 *See* Petition at 23-24.

285 *Id.* at 3, 23-24; Paine Decl. ¶¶ 4-5. Contrary to NRDC's assertion, the power generation alternatives considered in the ER are not limited to "single discrete generation sources". *See* ER at 7-13 to 7-15 (considering several combinations of renewable energy sources as reasonable alternatives).

286 Paine Decl. ¶ 5.

respectively.[287] It asserts that Exelon is required to quantify and balance the environmental effects of DSM and renewable energy sources with those of the proposed license renewal.[288] Finally, NRDC contends that the ER must include a "properly analyzed cost of a severe accident" in the No-Action alternative.[289]

Exelon opposes admission of Contention 4-E. First, NRDC's arguments related to renewable energy resources are unsupported, contrary to Section 2.309(f)(1)(v). The contention also is inadmissible because the ER contains the very information regarding renewable energy resources and DSM that NRDC alleges is missing, and therefore, the contention fails to raise a genuine dispute of fact contrary to Section 2.309(f)(1)(vi). Moreover, as a matter of law, Exelon as a merchant generator is not required to consider DSM. Finally, to the extent Contention 4-E addresses the need for power from Limerick, it is an impermissible challenge to the NRC's regulations and, therefore, is outside the scope of this proceeding contrary to Section 2.309(f)(1)(iii). As set forth below, Contention 4-E must be rejected on these grounds.

1. Legal Standards Governing the No-Action Alternative

Contention 4-E pertains to the evaluation of the No-Action alternative in the Limerick ER. Before explaining why Contention 4-E is not admissible, it is helpful to place NRDC's claims in the appropriate legal and regulatory context.

As discussed above, NEPA requires an applicant's ER to consider alternatives to the proposed action. However, NEPA requires *only* consideration of alternatives that are "feasible"

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287 *See* Petition at 24; Paine Decl. ¶ 7.

288 Paine Decl. ¶ 7; *see also* Petition at 23-24.

289 Petition at 24. NRDC claims that the ER and EIS should present a spectrum of potential releases and their effects to balance cost for replacement power with avoided risk of the consequences of a severe accident. *See* Paine Decl. ¶ 12. These release scenarios do not bear any relation to the No-Action alternative. Instead, they relate to NRDC's first three contentions regarding evaluation of SAMAs, which are refuted above.

or "reasonable."[290] Part 51 codifies a standard that federal courts have applied consistently in reviewing agency environmental impact statements.[291] Specifically, "an agency need follow only a 'rule of reason' in preparing an EIS," and "this rule of reason governs both *which* alternatives the agency must discuss, and the *extent* to which it must discuss them."[292] An agency, in other words, is required to examine only those alternatives that are necessary to permit a "reasoned choice."[293]

NEPA requires discussion of the alternative of taking "no action."[294] The Commission has held that the No-Action alternative is most easily viewed as maintaining the status quo; *i.e.*, not taking the proposed action.[295] In the present context, the No-Action alternative is denial of the renewed operating licenses for Limerick which necessarily means that the power generated from Limerick must be replaced by other sources or demand-side reductions.[296] The extent of the No-Action analysis is also governed by a "rule of reason."[297] The Commission has made clear that the No-Action alternative discussion may be brief and may cross-reference other sections of an ER discussing the project's adverse consequences.[298]

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290 *See City of Angoon v. Hodel*, 803 F.2d 1016, 1021 (9th Cir. 1986), *cert. denied*, 484 U.S. 870 (1987).

291 *See*, *e.g.*, 10 C.F.R. § 51.71(f) (requiring consideration of "reasonable alternatives").

292 *Citizens Against Burlington*, 938 F.2d at 195.

293 *Morton*, 458 F.2d at 836.

294 *See La. Energy Servs., L.P.* (Claiborne Enrichment Ctr.), CLI-98-3, 47 NRC 77, 97 (1998).

295 *Id*. at 97 (*citing Ass'n of Pub. Agency Customers v. Bonneville Power Admin.*, 126 F.3d 1158, 1188 (9th Cir. 1997)); *see also Private Fuel Storage, L.L.C.* (Indep. Spent Fuel Storage Installation), CLI-04-4, 59 NRC 31, 41 (2004); *Hydro. Res., Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 54 (2001).

296 *See S. Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-09-19, 70 NRC 433, 488-89 (2009) (finding that the no-action alternative while having the short-term effect of eliminating the environmental impacts discussed in the FEIS, would still require additional generation); *Tenn. Valley Auth*. (Bellefonte Nuclear Power Plant Units 3 & 4), LBP-08-16, 68 NRC 361, 403 (2008) (observing that the no-action alternative considers replacement power for the proposed nuclear reactor facility).

297 *Claiborne*, 47 NRC at 97 (*citing Citizens Against Burlington*, 938 F.2d at 195).

298 *See Hydro Res.*, CLI-01-4, 53 NRC at 54 ("[f]or the 'no action' alternative, there need not be much discussion"); *Claiborne*, CLI-98-3, 47 NRC at 98 ("[w]e do not find the [final environmental impact statement's] incorporation by reference approach unreasonable as such").

2. NRDC Does Not Adequately Plead Its Arguments Related to Renewable Energy Resources and Has Not Read the ER Carefully

a. Arguments Related to Renewable Energy Resources Are Devoid Of Supporting Facts, Contrary to 10 C.F.R. § 2.309(f)(1)(v)

As a threshold matter, the portions of Contention 4-E relating to renewable energy resources must be dismissed for failure to comply with 10 C.F.R. § 2.309(f)(1)(v), because they do not contain a concise statement of "the alleged facts or expert opinions" or "the specific sources and documents" on which the petitioner intends to rely to support its position.[299]

NRDC's arguments related to renewable energy resources as part of the No-Action alternative are bare assertions; they are vague, conclusory, and literally unsupported. These arguments consist of passing references to "waste heat co-generation, combined heat and power, and distributed renewable energy resources," or the Petition refers generally to "renewable energy sources."[300] Not only are these terms undefined in the Petition, but they also are not discussed in *any* detail in either the Petition or the supporting declaration.

Quite simply, NRDC has not provided a basis in Contention 4-E for any arguments regarding purported deficiencies in the analysis of renewable energy resources.[301] "[T]he reach of a contention necessarily hinges upon its terms coupled with its stated bases."[302] NRDC has failed to provide *any* bases related to renewable energy resources. Moreover, contention admissibility is strict by design and does not permit the petitioner to file vague, unsupported

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299 10 C.F.R. § 2.309(f)(1)(v).

300 Paine Decl. ¶ 7; Petition at 24.

301 *See S. Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 & 4), LBP-09-3, 69 NRC 139,158 (2009) (rejecting contentions that are "open-ended, placeholder contentions" that are not based on "documentary material or expert analysis").

302 *Seabrook*, ALAB-899, 28 NRC at 97.

contentions.[303] And the Commission has rejected such attempts as "mere notice pleading," stating that "[g]eneral assertions or conclusions will not suffice."[304]

In baldly asserting that the ER's No-Action alternative discussion fails to consider certain renewable energy resources, NRDC fails to meet its pleading obligations. For these reasons, the Board must reject these portions of Contention 4-E.

b. The ER Contains the Allegedly-Missing Discussion on Renewable Energy Resources Demonstrating That There is No Genuine Factual Dispute, Contrary to 10 C.F.R. § 2.309(f)(1)(vi)

There is another compelling reason why the Board must reject the renewable energy resources portions of Contention 4-E: because the ER contains the *very* information that NRDC alleges is missing. If a petitioner submits a contention of omission, as is the case here, but the allegedly-missing information is indeed in the ER, then the contention does not raise a genuine issue.[305] Any contention that fails to directly controvert the application or that mistakenly asserts the application does not address a relevant issue must be dismissed.[306]

The Paine Declaration states that "the ER unreasonably misapplies NRC guidance from the [GEIS] that limits the set of reasonable alternatives for meeting 'a defined generating requirement… to analysis of single, discrete electric generation sources.' (GEIS, 1996, cited at

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303 *Millstone*, CLI-01-24, 54 NRC at 358; *see also FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), LBP-11-13, 73 NRC __, slip op. at 22-23, 30, 34 (Apr. 26, 2011) (admitting renewable energy alternative contention, but rejecting the portion that was not supported); *PPL Susquehanna, LLC* (Susquehanna Steam Electric Station, Units 1 & 2), LBP-07-4, 65 NRC 281, 303-304 (2007) (contention rule helps to ensure that full adjudicatory hearings are triggered only by those able to proffer at least some minimal factual and legal foundation in support of their contentions).

304 *Consumers Energy Co.* (Palisades Nuclear Power Plant), CLI-07-18, 65 NRC 399, 414 (2007) (*quoting Power Auth. of the State of N.Y.* (James A. FitzPatrick Nuclear Power Plant), CLI-00-22, 52 NRC 266, 295 (2000)).

305 *See Millstone*, LBP-04-15, 60 NRC at 95-96; *Crowe Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Neb.), LBP-08-24, 68 NRC 691, 748 (2008). *Cf. Duke Energy Corp.* (McGuire Nuclear Station, Units 1 & 2; Catawba Nuclear Station, Units 1 & 2), CLI-02-28, 56 NRC 373, 383 (2002) ("Where a contention alleges the omission of particular information or an issue from an application, and the information is later supplied by the applicant . . . the contention is moot.").

306 *E.g.*, *Sacramento Mun. Util. Dist.* (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 247-48, *review denied*, CLI-94-2, 39 NRC 91 (1994).

ER, 7-2)."[307] But this is simply not the case for the ER that Exelon submitted for Limerick. As discussed below, it appears that NRDC copied a contention from the *Indian Point* license renewal proceeding, where the ER, there, purportedly did *not* discuss renewable energy resources (or DSM) as part of the No-Action alternative. But that is not the case here. The Limerick ER *did* discuss those resources.[308]

NRDC completely ignores and makes no attempt to controvert the relevant ER discussion on renewable energy alternatives. ER Sections 7.2.1.4 to 7.2.1.7, *which are explicitly cross-referenced into the No-Action alternative discussion in Section 7.1*,[309] present many renewable energy resources, including hydropower, wind power, solar power, geothermal energy, biomass energy, municipal solid waste, other biomass-derived fuels, and fuel cells.[310] And Exelon evaluated the environmental impacts of combinations of generation sources, including combinations of renewable energy sources as reasonable alternatives by 2024. ER Sections 7.2.2.5 to 7.2.2.8 discuss the environmental impacts of those renewable energy resources that Exelon identified as reasonable alternatives to license renewal – wind energy, solar energy, wind generation and/or solar photovoltaic generation combined with gas-fired combined-cycle generation and wind generation combined with compressed air energy storage.[311] Likewise, ER

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[307] Paine Decl. ¶ 4.

[308] *See* ER at 7-12 to 7-20, 7-29 to 7-36.

[309] Section 7.1 of the ER (*e.g.*, No-Action alternative) states the following:

> Replacement could be accomplished by (1) building new base-load generating capacity using energy from coal, gas, nuclear, wind, solar, other sources, or some combination of these . . . . Section 7.2.1 describes each of these possibilities in detail and Section 7.2.2 describes environmental impacts from alternatives deemed reasonable.

Id. at 7-3.

[310] *See id.* at 7-12 to 7-21.

[311] *See id.* at 7-29 to 7-36.

Section 8 compares the environmental impacts of license renewal with those of the reasonable renewable energy alternatives.[312]

NRDC simply has failed to read the ER contrary to 10 C.F.R. § 2.309(f)(1)(vi).[313] Exelon presented numerous renewable energy alternatives, a fact ignored by NRDC. As a result, NRDC fails to identify any specific error in Exelon's discussion of these alternatives and has, therefore, failed to raise a genuine issue with regard to any material fact or law.

3. NRDC's Arguments Related to DSM Do Not Raise a Genuine Factual Dispute with the ER

a. Contention 4-E, A Contention of Omission, Again Fails Because the Limerick ER Contains the Allegedly-Missing Information Related to DSM

NRDC also alleges that Exelon's No-Action alternative analysis is inadequate because it fails to adequately consider DSM. Specifically, the Paine Declaration, upon which NRDC exclusively relies for "supporting evidence" for this contention,[314] states that:

> [M]andatory consideration of the environmental impacts of the No Action alternative . . . necessarily involves making an informed projection of the likely portfolio of PJM electricity system resources available in the region served by [Limerick] beginning 13 years and 18 years hence that could reasonably be expected to supply the energy services currently supplied by [Limerick]. These reasonably foreseeable system resources include all forms of Demand Side Management . . . .[315]

As explained above, however, Contention 4-E is a contention of omission.[316] And like the claim against renewable energy resources discussed above, this claim also ignores the content of the ER.

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312 *See id.* at 8-2 to 8-8.

313 *See Catawba*, ALAB-687, 16 NRC at 468; *Millstone*, CLI-01-24, 54 NRC at 358.

314 Petition at 24 ("The bases for this contention are support [*sic*] by the Declaration of Christopher E. Paine . . . .").

315 Paine Decl. ¶ 7.

316 Petition at 31.

The No-Action discussion in Section 7.1 of the ER specifically mentions DSM: "the no-action alternative is defined as having two components – replacing the generating capacity of [Limerick] and decommissioning the [Limerick] facility, as described below. . . . Replacement [power] could be accomplished by . . . (3) reducing power requirements through demand side reduction."[317] And the ER cross-references the detailed discussion of DSM in ER Section 7.2.1.7.[318]

In the *Claiborne* proceeding, the Commission found that the FEIS' incorporation by reference approach to the No-Action alternative was not unreasonable.[319] There, in the No-Action alternative discussion, the FEIS generally referenced other chapters discussing positive and negative impacts of the proposed action by simply stating:

> The no-action alternative is the denial of the NRC license necessary to construct and operate the [Claiborne Enrichment Center]. With this alternative, the impacts, both positive and negative, *discussed in this chapter* would be eliminated. The site is assumed to revert to its former use, however, the owner would be free to pursue other uses.[320]

In finding that the No-Action discussion was not inadequate on the ground that it cross-referenced earlier sections of the FEIS rather than repeating them, the Commission stated that "it was not necessary for the 'no–action' discussion to repeat lengthy assessments of adverse environmental impacts contained in [the referenced chapter]."[321] In accordance with these prior Commission statements that the No-Action discussion can cross-reference other sections of the

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317 ER at 7-3.

318 *See id.* at 7-3, 7-16 to 7-17.

319 *See Claiborne*, CLI-98-3, 47 NRC at 98.

320 NUREG-1484, Final Environmental Impact Statement for the Construction and Operation of Claiborne Enrichment Center, Homer, Louisiana, Vol. 1, at 4-77 (Aug. 1994) (emphasis added), *available at* ADAMS Accession No. ML051100224.

321 *Claiborne*, CLI-98-3, 47 NRC at 98.

ER, the ER's No-Action discussion cross-references ER Section 7.2.1.7 rather than repeating its discussion of the impacts of DSM. NRDC appears to have missed this cross-reference.

ER Section 7.2.1.7 summarizes the results from a Center for Energy, Economic and Environmental Policy study of actual New Jersey electricity savings data to projected energy savings. And ER Section 7.2.1.7 includes a qualitative analysis[322] of conservation costs and total peak load reductions based on national DSM trends from 2003 to 2008.[323] In light of such data, the ER concludes that it would be highly unlikely that energy savings from DSM in the PJM region would increase by 2,340 MWe by 2024 to replace the Limerick baseload capacity.[324]

ER Section 7.2.1.7 also includes a discussion of the environmental impacts of the DSM alternative. ER Section 7.2.1.7 observes that, unlike discrete generation options, there would be no major generating facility construction and few ongoing operational impacts but could require the construction of new transmission lines due to the loss of Limerick's generating capacity.[325] Moreover, ER Section 7.2.1.7 states that the "most significant effects would likely occur during installation or implementation of conservation measures, when old appliances may be replaced, building climate control systems may be retrofitted, or new control devices may be installed."[326] The ER then concludes that the environmental impacts from the DSM alternative are small.[327]

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322 In so far as NRDC might imply that Exelon must conduct a quantitative analysis of DSM based on market forecasts, such assertion is contrary to NRC precedent and thus fails to raise a genuine dispute. *See, e.g., Sierra Club v. Lynn,* 502 F.2d 43, 61 (5th Cir. 1974), *cert. denied*, 422 U.S. 1049 (1975) ("NEPA does not demand that every federal decision be verified by reduction to mathematical absolutes for insertion into a precise formula.").

323 *See* ER at 7-16.

324 *Id.* at 7-17.

325 *Id*.

326 *Id.*

327 *Id.*

The ER further supports its conclusion that the DSM impacts are small by noting that DSM measures are already captured in state and regional load projections.[328]

No further discussion in the ER of DSM is necessary under NEPA.[329] By failing to point to specific parts of the ER's discussion of DSM, which is cross-referenced in the No-Action alternative, NRDC has failed to provide sufficient information to show that a genuine factual dispute exists.

b. NEPA Does Not Require Exelon to Consider DSM

NRDC's assertion that the ER's No-Action alternative analysis is improperly narrow fails in another significant respect. Exelon is a merchant generator[330] and, as a matter of law, is not required to consider DSM.

Although the Petition is silent on this issue, the Paine Declaration apparently challenges the legitimacy of Exelon's corporate structure by alleging that Exelon's parent company and the parent's other subsidiaries are involved with retail delivery of electricity. Paine's Declaration unmistakably implies that because these other subsidiaries of Exelon's parent company can implement DSM, that the Board must imbue Exelon (the applicant) with the abilities of these other subsidiaries. The Paine Declaration provides no legal or other citation (other than the Exelon Corporation website) to support this argument.

In the *Clinton* early site permit proceeding, the Commission agreed that Exelon Generation Company, LLC (the very same applicant in this case), was a merchant generator of electricity, and held that it was "not obliged to examine general efficiency or conservation proposals that would do nothing to satisfy [the] particular project's [goal of producing baseload

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328 *Id.*

329 *See Hydro Res.*, CLI-01-4, 53 NRC at 54; *Claiborne*, CLI-98-3, 47 NRC at 98; *see also* Section V.E.1, *supra*.

330 *See* ER at 7-16.

power]."[331] There, the Commission emphasized that "the NEPA 'rule of reason' does not demand any analysis of what the Board called the 'general goal' of energy efficiency" because "energy efficiency" was not a reasonable alternative for a merchant power producer.[332] The Commission further stressed that "neither the NRC nor Exelon has the mission (or power) to implement a general societal interest in 'energy efficiency.'"[333] In affirming the NRC's *Clinton* decision, the Seventh Circuit expressly agreed that "it was reasonable for the [NRC] to conclude that NEPA did not require consideration of energy efficiency alternatives when [the applicant] was in no position to implement such measures."[334]

Mr. Paine's argument—which does not mention the *Clinton* decision by name—is unavailing. First, the fact that Exelon's parent company (Exelon Corporation) may have other subsidiaries that are retail energy suppliers does not support his argument.[335] The applicant in *Clinton* was Exelon Generation Company, LLC; the same company that is the applicant here. There, the NRC found that the applicant was not the parent company or any of its other subsidiaries and, thus, did not have a transmission or distribution system of its own or a direct link to the ultimate consumer.[336] This unsupported challenge on that front has already been soundly rejected by a court of appeals.

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331 *Exelon Generation Co.* (Early Site Permit for Clinton ESP Site), CLI-05-29, 62 NRC 801, 808 (2006), *aff'd sub nom.*, *Envtl. Law & Policy Ctr. v. NRC*, 470 F.3d 676 (7th Cir. 2006).

332 *Id.* at 807; *see also Indian Point*, LBP-08-13, 68 NRC at 204-205 (dismissing a contention alleging that the applicant's ER failed to adequately consider DSM in the alternatives analysis, in part, because conservation measures are beyond the ability of an applicant to implement).

333 *Clinton*, CLI-05-29, 62 NRC at 806.

334 *Envtl. Law & Policy Ctr.*, 470 F.3d at 684.

335 *See* Paine Decl. ¶¶ 8-9, 11.

336 *Clinton*, CLI-05-29, 62 NRC at 152; s*ee also Sequoyah Fuels Corp.* (Gore, Okla. Site Decontamination & Decommissioning Funding), LBP-94-17, 39 NRC 359, 364 (1994) (uranium processing center operator and its parent are separate legal entities absent the showing of circumstances to permit piercing of the corporate veil).

Second, Mr. Paine asserts that any prior NRC decision about DSM in an ER applied only to the reasonable alternatives analysis, not to the No-Action alternative.[337] Mr. Paine does not provide any legal citation or other support for this argument, although we expect that he is relying on a Board decision to admit a contention in the *Indian Point* license renewal proceeding, discussed below.[338]

While Exelon does not agree with Mr. Paine's conclusion, the Board does not need to examine the validity of that conclusion because the facts are different here. The Board in *Indian Point* interpreted Section 8.2 of the GEIS to mean that the No-Action alternative must consider the market's response to denial of the license renewal application — specifically, the possibility of increased energy conservation measures. Based on this reasoning, the Board concluded that *Clinton* applies only to the reasonable alternatives analysis.[339]

It is significant that, unlike the applicant in the pending *Indian Point* proceeding, Exelon provides an analysis of DSM in the ER which is cross-referenced in the No-Action alternative discussion. In *Indian Point*, the applicant concluded that utility-sponsored conservation was not a reasonable alternative and did not provide any further analysis.[340] And that conclusion was not cross-referenced in the No-Action alternative discussion in the ER.[341] Here, the ER already contains an analysis of market-based DSM.

Moreover, this Board is not bound by the Board's decision in *Indian Point*. In the *Clinton* proceeding, the Commission considered the need for a merchant generator to consider

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337 *See* Paine Decl. ¶ 10.

338 *See Indian Point*, LBP-08-13, 68 NRC at 92-93 (admitting a portion of a contention regarding omission of energy conservation from the applicant's No-Action alternative analysis).

339 *See id.*

340 *See* Indian Point Energy Center, Applicant's Environmental Report – Operating License Renewal Stage at 7-5 (Apr. 2007), *available at* ADAMS Accession No. ML071210530.

341 *See id.* at 7-1.

DSM in the context of the reasonable alternatives analysis. Neither the Commission's nor the Seventh Circuit's decision foreclose application of their holding to the No-Action alternative. Reliance on the GEIS is not dispositive because the GEIS itself is clear that, as a guidance document, it carries no binding legal requirement with respect to the alternatives analysis: "In preparing the alternatives analysis, the applicant *may* consider information regarding alternatives in this GEIS".[342] Therefore, this Board can conclude that just as a merchant generator need not consider DSM as part of the reasonable alternative energy analysis, the merchant generator need not consider DSM as part of the No-Action alternative. This is a consistent application of the law, and federal jurisprudence supports such consistent application.[343]

For the reasons stated above, NRDC's arguments do not raise a genuine dispute of material fact or law as to the ER's treatment of DSM and renewable energy resources in the No-Action alternative. Therefore, Contention 4-E should be rejected as not satisfying 10 C.F.R. § 2.309(f)(1)(vi).

4. *Arguments in Contention 4-E that Address the Need for Power from Limerick Impermissibly Challenge NRC Regulations and Are Outside the Scope of This Proceeding*

Contention 4-E is inadmissible to the extent that it is a *de facto* challenge to the "need for power" from Limerick. NRDC appears to argue that there is no need for power from Limerick during the license renewal period. In particular, NRDC states that the ER fails to consider the "expected growth in demand side management" that could "reasonably be expected to supply the

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342 GEIS § 1.7.2 (emphasis added).

343 *See*, *e.g.*, *Allentown Mack Sales & Serv., Inc. v. NLRB*, 522 U.S. 359, 375 (1998) ("Reasoned decisionmaking, in which the rule announced is the rule applied, promotes sound results, and unreasoned decisionmaking the opposite. The evil of a decision that applies a standard other than the one it enunciates spreads in both directions, preventing both consistent application of the law by subordinate agency personnel (notably ALJ's), and effective review of the law by the courts."); *Siegel v. SEC*, 592 F.3d 147, 161-62 (D.C. Cir. 2010) (*citing Allentown Mack*, 522 U.S. at 375) (rejecting the SEC's construction of the causation requirement for awarding restitution for violation of the National Association of Securities Dealers Conduct Rules, in part, because the SEC's interpretation prevented consistent application of the causation requirement).

energy services currently supplied by [Limerick]."[344] Plainly, such an inquiry would amount to a need for power analysis.[345] The No-Action alternative analysis does *not* entail re-examining the need for power based on market forecasts of DSM trends.

The regulations governing the content of an ER for license renewal, 10 C.F.R. § 51.53(c)(2), clearly state that the ER "is not required to include discussion of need for power."[346] Therefore, because an evaluation of the need for power from Limerick is not required to be included in the ER, NRDC's arguments are outside the scope of this proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii), and do not support an admissible contention.[347] Furthermore, these arguments represent an impermissible challenge to the requirements specified in Section 51.53(c)(2) of the NRC's regulations. As stated above, absent a waiver, "no rule or regulation of the Commission … is subject to attack … in any adjudicatory proceeding."[348] NRDC has not sought or received a waiver of 10 C.F.R. §51.53(c)(2).

In summary, the portion of Contention 4-E regarding renewable energy resources lacks an adequate factual basis. Neither the renewable energy resources nor DSM bases of the contention raise a genuine dispute because the allegedly missing information is in fact contained in the ER. Finally, Exelon is not required as a matter of law to provide an analysis of DSM or

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344 Petition at 24; Paine Decl. ¶ 7.

345 *See Clinton*, 62 NRC at 159 ("[D]emand side management, no matter how it is characterized, remains an alternative to generation of power, and examination of such an option is nothing more than a surrogate for examination of the 'need' for power . . . .").

346 *See also* Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. at 28,484 (stating that the "Commission has concluded that, for license renewal, the issues of need for power . . . should be reserved for State and utility officials to decide" and "the NRC will not conduct an analysis of these issues in the context of license renewal").

347 *See Davis-Besse*, LBP-11-13, slip op. at 23-24 (dismissing portion of contention challenging the need for power on the ground that such portion of that contention is a challenge to Section 51.53(c)(2) and outside the scope of a license renewal proceeding). *Cf. Watts Bar*, LBP-09-26, 70 NRC at 976-77 (holding that NEPA does not require consideration of the need for power in an operating license application).

348 10 C.F.R. § 2.335(a).

the need for power. Accordingly, the Board should deny admission of Contention 4-E given its failure to meet 10 C.F.R. § 2.309(f)(1)(iii), (v), and (vi).

VI. CONCLUSION

For reasons discussed above, NRDC's Petition must be denied. Among other things, the Petition impermissibly challenges NRC rules and argues omissions in the ER that are patently untrue. NRDC raises many disputes with the Exelon ER for Limerick, but none is genuine or pertains to a material issue, as required by Section 2.309(f)(1)(vi). Accordingly, the Petition must be denied in its entirety.

Respectfully submitted,

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

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Dated in Washington, D.C.
this 20th day of December 2011

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	Docket Nos. 50-352-LR
	)	50-353-LR
EXELON GENERATION COMPANY, LLC	)	
	)	
(Limerick Generating Station, Units 1 and 2)	)	December 20, 2011

CERTIFICATE OF SERVICE

I hereby certify that on this date a copy of "Exelon's Answer Opposing NRDC's Petition to Intervene" was filed electronically with the Electronic Information Exchange in the above-captioned proceeding.

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