

**UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION**

**BEFORE THE COMMISSION**

In the Matter of:	)	
	)	
EXELON GENERATION COMPANY, LLC	)	Docket No. 50-352-LR
	)	Docket No. 50-353-LR
(Limerick Generating Station, Units 1 and 2)	)	
(License Renewal Application)	)	

**NATURAL RESOURCES DEFENSE COUNCIL'S RESPONSE TO APPEALS  
BY EXELON, INC. AND NRC STAFF OF LBP-12-08**

Anthony Z. Roisman  
National Legal Scholars Law Firm, P.C.  
241 Poverty Lane, Unit 1  
Lebanon, NH 03766  
603-443-4162  
[aroisman@nationallegalscholars.com](mailto:aroisman@nationallegalscholars.com)

Geoffrey H. Fettus  
Natural Resources Defense Council  
1152 15<sup>th</sup> Street, NW, Suite 300  
Washington, D.C. 20005  
202-289-2371  
[gfettus@nrdc.org](mailto:gfettus@nrdc.org)

April 26, 2012

## TABLE OF CONTENTS

TABLE OF CONTENTS .....	i
TABLE OF AUTHORITIES .....	ii
INTRODUCTION .....	1
SUMMARY OF ARGUMENT .....	2
RELEVANT FACTS .....	4
STANDARD OF REVIEW .....	5
LEGAL FRAMEWORK .....	6
LEGAL PRINCIPLES APPLIED TO RELICENSING .....	8
ARGUMENT .....	10
I. Introduction to Argument .....	10
II. Errors In Applicant’s Environmental Report Related To Category 2 Issues Are Valid Subjects of Contentions .....	11
A. Site-specific consideration of alternatives under NEPA are subject to challenge in NRC licensing proceedings .....	11
B. Public participation and ASLB hearings are a vital part of assuring that the final decision is based on an accurate and complete environmental review .....	13
C. Analysis of new and significant information related to severe accident mitigation alternatives is directly relevant to the license renewal decision .....	14
D. 10 C.F.R. § 51.53(c)(3)(ii)(L) does not exempt, from ASLB review, Exelon’s analysis of new and significant information related to the site-specific 1989 SAMDA .....	15
1. 10 C.F.R. § 51.53(c)(3)(ii)(L) is not at issue .....	16
2. Case law does not support Exelon and Staff arguments .....	18
3. Consideration of new and significant information related to the 1989 SAMDA does not require Exelon to conduct a SAMA analysis .....	23
4. Regulatory history does not support Exelon’s radical views .....	23
III. Contention 1E Meets All Other Contention Admissibility Criteria .....	25
CONCLUSION .....	27

## TABLE OF AUTHORITIES

### Cases

<i>Anderson v. City of Bessemer City, N.C.</i> , 470 U.S. 564 (1985) .....	6
<i>Baltimore Gas &amp; Elec. Co. v. Natural Res. Def. Council</i> , 462 U.S. 87 (1983).....	7
<i>Calvert Cliffs Coordinating Comm. v. United States Atomic Energy Commission</i> , 449 F.2d 1109 (D.C. Cir. 1971).....	12, 15
<i>Conservation Northwest v. Rey</i> , 674 F. Supp. 2d 1232 (W.D. Wash. 2009) .....	13
<i>Crow Butte Resources, Inc.</i> (License Renewal for In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 33 (2009).....	6
<i>DOT v. Public Citizen</i> , 541 U.S. 752 (U.S. 2004) .....	15
<i>Duke Energy Corporation</i> (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), 56 NRC 1 (2002).....	14
<i>Entergy Nuclear Generation Co</i> , LBP-06-23 64 NRC 257 (2006) .....	18
<i>Entergy Nuclear Vermont Yankee, LLC. &amp; Entergy Nuclear Operations, Inc.</i> , CLI-07-03, 65 NRC 13 (2007).....	18, 19, 20
<i>Entergy Nuclear Generation Co.</i> , LBP-06-20, 64 NRC 131 (2006) .....	18, 20
<i>Entergy Nuclear Generation Co. et al.</i> , LBP-06-23, 64 NRC 257 (2006).....	8, 18
<i>Entergy Nuclear Operations, Inc.</i> (Indian Point Nuclear Generating Units 2 and 3), LBP-11-17, interlocutory review denied CLI-11-14.....	15, 27
<i>Fla. Power &amp; Light Co.</i> (Turkey Point Nuclear Generating Plant, Units 3 & 4), CLI-01-17, 54 NRC at 3 (2001).....	18, 20
<i>Infanzon v. Ashcroft</i> , 386 F.3d 1359 (10th Cir. 2004) .....	6
<i>Limerick Ecology Action v. NRC</i> , 869 F.2d 719 (3d Cir. 1989) .....	5, 9, 15, 27
<i>Louisiana Energy Services, L.P.</i> (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77 (1998).....	7, 12, 14
<i>Marsh v. Oregon Natural Resources Council</i> , 490 U.S. 360 (1989).....	13, 14, 17
<i>Native Ecosystems Council v. U.S. Forest Svc.</i> , 418 F.3d 953 (9th Cir. 2005).....	13
<i>Oregon Natural Resources Council Action v. U.S. Forest Service</i> , 445 F.Supp.2d 1211 (D. Or. 2006).....	13
<i>Pacific Gas And Electric Company</i> (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, __N.R.C.__.....	6
<i>Pa'ina Haw., LLC</i> , CLI-10-18, 72 N.R.C. 56 (2010).....	7
<i>Philadelphia Electric Co.</i> (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681 (1985).....	12
<i>Robertson v. Methow Valley Citizens Council</i> , 490 U.S. 332 (1989) .....	7, 15
<i>Thomas v. Allen</i> , 607 F.3d 749 (11th Cir. 2010) .....	6
<i>U.S. v. Allegheny Ludlum Corp.</i> , 366 F.3d 164 (3d Cir. 2004) .....	6
<i>Union Elec. Co. et al.</i> , CLI-11-05, 74 NRC ____, 2011 (2011 WL 4027741) .....	9, 23

### Statutes

42 U.S.C. § 4331 .....	7
42 U.S.C. § 4332(2)(c)(iii) .....	7
42 U.S.C. §§ 4321-37.....	1

**Regulations**

10 C.F.R. § 2.309 .....7  
10 C.F.R. § 2.309(f)(1)(v) .....7  
10 C.F.R. § 2.311 .....5, 25  
10 C.F.R. § 2.335 ..... 16, 17  
10 C.F.R. § 2.341 .....5  
10 C.F.R. § 2.341(f) .....25  
10 C.F.R. § 51.103(a)(3), (5).....7  
10 C.F.R. § 51.104(a)(2) .....12  
10 C.F.R. § 51.53 .....6  
10 C.F.R. § 51.53(3)(c) .....24  
10 C.F.R. § 51.53(c)(3)(ii)(L)..... passim  
10 C.F.R. § 51.53(c)(3)(iv)..... 9, 16, 17, 22  
10 C.F.R. § 51.53(c)(3)(iv)..... 14, 17  
10 C.F.R. § 51.91(3)(c) .....7  
10 C.F.R. § 51.95(c)(3) ..... 14, 17  
10 C.F.R. § 51.95(c)(4) .....7, 9  
10 C.F.R. Part 51, Subpart A, Appendix A at Section 1(b) .....18  
10 C.F.R. Part 51, Subpart A, Appendix A at Section 5 .....13  
10 C.F.R. Part 51, Subpart A, Appendix B ..... passim  
10 C.F.R. Part 51, Subpart A, Appendix B, n. 2.....8  
10 C.F.R. § 311(c).....5  
40 C.F.R. § 1502.14(d).....7

**Federal Register**

54 Fed. Reg. 33,168, 33,170, (August 11, 1989) Rules of Practice for Domestic Licensing  
Proceedings - Procedural Changes in the Hearing Process. ....8  
56 Fed. Reg. 47016 (September 17, 1991) Environmental Review for Renewal of Operating  
Licenses .....24

**Other Authorities**

SECY-93-032. ML072260444, 10 CFR Part 51 Rulemaking On Environmental Review For  
Renewal Of Nuclear Power Plant Operating Licenses .....24

## INTRODUCTION

Exelon and NRC Staff urge the Commission to flaunt its own regulations, the National Environmental Policy Act (“NEPA”) (42 U.S.C. §§ 4321-37) and federal case law. While they agree that the conclusions of a 1989 site-specific analysis of severe accident mitigation alternatives for Limerick must be updated by new and significant information to “assess whether [there is] new information that would suggest the need to evaluate additional severe accident mitigation alternatives,”<sup>1</sup> they erroneously conclude that this update is beyond participatory NEPA review and adjudication in a relicensing proceeding regardless of how many decades have passed since the analysis was conducted. No Commission rule or decision sanctions this wholesale deprivation of the adjudicatory rights guaranteed to citizens and states under the APA, NEPA and the Commission’s implementing regulations, and Exelon and the NRC staff have cited none.

On November 22, 2011, the Natural Resources Defense Council (“NRDC”) filed its Petition to Intervene and Notice of Intention to Participate (“Petition” or “Pet.”), proposing four contentions. Following full briefing on the issues of standing and the admissibility of each contention, the Atomic Safety & Licensing Board (“ASLB” or “Board”) conducted a day-long hearing on these matters on February 20, 2012. On April 4, 2012, the Board issued LBP-12-8, Memorandum and Order, Ruling on Petition to Intervene and Request for Hearing (“LBP-12-8”). The Board held that NRDC had established standing and admitted portions of one of four contentions. LBP-12-8 at 40. On April 16, Exelon Generation Company, LLC (“Exelon”) and NRC Staff filed appeals of LBP-12-08, to which NRDC now responds. As explained below,

---

<sup>1</sup> Environmental Report for License Renewal (“ER-LR”) at 5-4.

Exelon's and the Staff's strained arguments not only disregard over 40 years of NRC compliance with its obligations under the National Environmental Policy Act ("NEPA")—by urging the Commission to prohibit a hearing on a site-specific environmental issue—but depend critically on imputing to the Intervenor certain fictitious actions and objectives which were never part of the original Contention 1E, and are not part of the portion that was reframed and admitted by the Board. The Commission should therefore deny their appeals. The Commission should also deny Exelon's request for expedited review and send the matter back to the ASLB for further proceedings consistent with LBP-12-8.

### **SUMMARY OF ARGUMENT**

The ASLB correctly concluded that NRDC's challenge to the adequacy of Exelon's NEPA analysis of new and significant information, as it relates to the 1989 site-specific analysis of severe accident mitigation alternatives (1989 Supplement to NUREG 0974 (Final Environmental Statement related to the operation of Limerick Generating Station, Units 1 and 2)("1989 SAMDA")), was appropriate for consideration in this licensing renewal proceeding. The ASLB followed well-established legal precedent and NRC practice allowing an intervenor to challenge site-specific conclusions in an applicant's Environmental Report.

Exelon and NRC Staff base their appeal of the ASLB's decision on the following proposition: that despite the rule designating severe accident mitigation alternatives ("SAMAs") as a "Category 2" issue requiring site-specific review in a Final Supplemental Environmental Impact Statement ("FSEIS"), and despite the undisputed requirement for supplemental NEPA consideration during the relicensing process of "new and significant information," the ASLB is nonetheless prohibited from considering a well-pled contention highlighting the ER's alleged failure to properly take account of such new and significant information related to the 1989

SAMDA.

This view would require the Commission to find that its rules may be fairly construed to sanction stripping citizens of a procedural right guaranteed them under the APA and NEPA. This radical view inappropriately rests on Commission decisions that are not relevant here. In those decisions the Commission only prohibited relicensing challenges to an ER's analysis of environmental impacts, based on allegedly new and significant information, if the impact sought to be challenged was a Category 1 issue whose impacts had been generically resolved by rule. The rule upon which Exelon and NRC Staff rely, 10 C.F.R. § 51.53(c)(3)(ii)(L), neither establishes a generic environmental impact, nor converts an existing 1989 SAMDA analysis into a Category 1 issue, and therefore it is irrelevant to this appeal.

Exelon and NRC Staff also assert that the admitted contention does not meet the admissibility requirements because they disagree with the detailed expert declarations submitted by NRDC's two PhD's in physics and one PhD in nuclear engineering. Declaration of Thomas B. Cochran, Ph.D., Matthew G. McKinzie, Ph.D. and Christopher J. Weaver, Ph.D., on Behalf Of the Natural Resources Defense Council (11/22/11) ("NRDC Expert Declaration"). Such disagreements are to be resolved at the hearing, not at the admissibility phase of the proceeding.

Finally, it is not disputed that Exelon was required to do an analysis of new and significant information as it relates to the previous 1989 SAMDA. It is not disputed that the purpose of that analysis was to determine whether additional severe accident mitigation alternatives should be evaluated for Limerick. It is not disputed, for purposes of this appeal,<sup>2</sup>

---

<sup>2</sup> NRDC does not agree with the limitations imposed by the Board on Contention 1E or its rejection of Contention 2E, 3E and 4E. Contention 3E challenged the conclusion in the ER that the 1989 SAMDA qualified as a previous Staff analysis of severe accident mitigation alternatives within the meaning of 10 C.F.R. § 51.53(c)(3)(ii)(L). However, NRDC's challenge

that by operation of 10 C.F.R. § 51.53(c)(3)(ii)(L), Exelon is not required to do a SAMA. The issue for this appeal is whether, in compliance with long-standing precedent, the ASLB correctly concluded that NRDC may challenge Exelon's flawed NEPA consideration of new and significant information related to the 1989 SAMDA.

### **RELEVANT FACTS**

Limerick Generating Station, Units 1 and 2 ("Limerick") are General Electric boiling water reactors using a Mark II containment design, a design used for several other plants that have sought license renewal. Exelon's Application for renewed licenses for Limerick includes a discussion of its severe accident mitigation alternatives analysis obligations. ER-LR at 4-49. The ER-LR also states that "the regulations do require that an applicant identify any new and significant information of which the applicant is aware [10 CFR 51.53(c)(3)(iv)]." *Id.* at 5-2. Exelon focused its analysis on "new and significant" information related to the 1989 SAMDA. *Id.* at 5-2.

With one notable exception, the ER-LR builds on the initial Environmental Report Operating License Stage (1984)("ER-OL") prepared by the then owner of Limerick, Philadelphia Electric Company. The 1984 ER-OL is referenced dozens of times throughout Exelon's current Environmental Report as PECO 1984. The ER-OL was a site-specific analysis of environmental factors relevant to the initial operating license. NRC's Final Environmental Statement (NUREG-0974)(1984)("FEIS-OL") was similarly site-specific and, with one exception, of particular relevance here, was not rejected by the Commission or any Court decision. The one exception was the decision of the United States Court of Appeals for the Third Circuit which held in

---

to those rulings will have to await further action by the Commission or the ASLB that would

*Limerick Ecology Action v. NRC*, 869 F.2d 719, 729-31 (3d Cir. 1989) that NRC may not avoid its NEPA responsibilities simply by complying with the AEA. Following the *Limerick* decision NRC prepared a site-specific Supplement to the FEIS-OL. 1989 SAMDA. That supplement provided an analysis of severe accident mitigation design alternatives for Limerick.

NRDC timely petitioned to intervene in the relicensing proceeding and raised four environmental contentions, all of which were opposed by Exelon and NRC Staff. NRDC Petition; Exelon's Answer Opposing NRDC's Petition To Intervene (12/20/2011); NRC Staff's Answer To Natural Resource Defense Council Petition To Intervene And Notice Of Intention To Participate (12/21/2012). Contrary to repeated assertions by Exelon and NRC Staff in their appeal filings, NRDC did not, and does not allege that Exelon must do a new SAMA. *See e.g.* Natural Resources Defense Council Combined Reply to Exelon and NRC Staff Answers to Petition to Intervene (January 6, 2012) at 4.

After full briefing and oral argument the ASLB issued a thorough opinion in which it granted NRDC's Petition to Intervene, admitted portions of one contention (Contention 1E) and denied the remaining contentions. LBP-12-8 at 40. Pursuant to 10 C.F.R. § 2.311, the only issue the Commission will accept for appeal is "whether the request/petition should have been wholly denied." *Id.* § 311(c).<sup>3</sup>

### STANDARD OF REVIEW

"The Commission defers to a Board's rulings on standing and contention admissibility in the absence of clear error or abuse of discretion." *Crow Butte Resources, Inc.* (License Renewal

---

trigger NRDC's appeal rights pursuant to 10 C.F.R. §§ 2.311 and/or 2.341.

<sup>3</sup> As discussed in more detail below, the limited scope of the basis for an appeal pursuant to § 2.311, precludes consideration of Exelon's argument that one of two bases of Contention 1E should have been rejected, since, even if Exelon were correct, that would not result in denial of

for In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 N.R.C. 331, 336 (2009); *Pacific Gas And Electric Company* (Diablo Canyon Nuclear Power Plant, Units 1 and 2) CLI-11-11, \_\_N.R.C.\_\_ (“Section 311(d)(1) provides for appeals as of right on the question whether a request for hearing should have been wholly denied. In ruling on PG&E’s appeal, we apply a deferential standard of review. That is, we will defer to the Board’s rulings on contention admissibility absent an error of law or abuse of discretion.” Slip op. at 4 (footnotes omitted)). Abuse of discretion and clear error are both “highly deferential” standards of review. *See, e.g., U.S. v. Allegheny Ludlum Corp.*, 366 F.3d 164, 190 (3d Cir. 2004); *Thomas v. Allen*, 607 F.3d 749, 752 (11th Cir. 2010). An adjudicatory body abuses its discretion only when “its decision provides no rational explanation, inexplicably departs from established policies, is devoid of any reasoning, or contains only summary or conclusory statements.” *Infanzon v. Ashcroft*, 386 F.3d 1359, 1362 (10th Cir. 2004). Clear error exists only when “the reviewing court on the entire evidence is left with the definite and firm conviction that a mistake has been committed.” *Anderson v. City of Bessemer City, N.C.*, 470 U.S. 564, 573 (1985).

## LEGAL FRAMEWORK

Evaluation of the environmental impacts associated with proposed license renewal is governed by NEPA, 10 C.F.R. § 51.53, Commission decisions, and federal case law interpreting the environmental obligations of federal agencies when undertaking major federal actions. As a federal agency, the NRC must comply with NEPA.<sup>4</sup> NEPA has twin purposes, both of which are procedural in nature. One purpose is to ensure that environmental values are fully considered in

---

the petition to intervene.

<sup>4</sup> *Calvert Cliffs Coordinating Comm. v. United States Atomic Energy Commission*, 449 F.2d 1109 (D.C. Cir. 1971) (NEPA applies to NRC’s predecessor).

the agency's decision-making.<sup>5</sup> "NEPA establishes a 'broad national commitment to protecting and promoting environmental quality.' *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 348 (1989), citing 42 U.S.C. § 4331. To ensure this commitment is 'infused into' the actions of the federal government, NEPA mandates particular 'action-forcing' procedures."<sup>6</sup>

In furtherance of these goals, NEPA requires a comparative analysis of the environmental consequences of the alternatives before the agency. 42 U.S.C. § 4332(2)(c)(iii); 40 C.F.R. § 1502.14(d). NEPA section 102(2)(E) further requires federal agencies to "study, develop, and describe appropriate alternatives to recommend courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." NRC recognizes that NEPA requires that the EIS "[r]igorously explore and objectively evaluate all reasonable alternatives."<sup>7</sup>

The above requirements are all conditions that precede the NRC's license renewal decision and issuance of a Record of Decision ("ROD"). Pursuant to 10 C.F.R. §§ 51.91(3)(c), 51.95(c)(4), and 51.103(a)(3), (5), the Board shall render a recommendation based on the information and analysis set forth in Staff's FSEIS, and shall state how the alternatives considered in it and decisions based on it will, or will not, achieve the requirements of sections 101 and 102(1) of NEPA and of other relevant and applicable environmental laws and policies.

NRC provides for the opportunity for interested parties, like NRDC, to raise properly pled issues regarding a proposed license renewal in hearings conducted by an ASLB. 10 C.F.R. § 2.309. The Commission has made clear that the requirement at § 2.309(f)(1)(v) "does not call

---

<sup>5</sup> See *Baltimore Gas & Elec. Co. v. Natural Res. Def. Council*, 462 U.S. 87, 97 (1983).

<sup>6</sup> *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 88 (1998)(some citations omitted).

<sup>7</sup> *Pa'ina Haw., LLC*, CLI-10-18, 72 N.R.C. 56, 75 (2010)(citation omitted).

upon the intervenor to make its case at [the contention] stage of the proceeding, but rather to indicate what facts or expert opinions, be it one fact or opinion or many, of which it is aware at that point in time which provide the basis for its contention.” 54 Fed. Reg. 33,168, 33,170, (August 11, 1989) Rules of Practice for Domestic Licensing Proceedings - Procedural Changes in the Hearing Process. A petitioner does not have to provide a complete or final list of its experts or evidence or prove the merits of its contention at the admissibility stage. And, as with a summary disposition motion, the support for a contention may be viewed in a light that is favorable to the petitioner so long as the admissibility requirements are found to have been met. The requirement “generally is fulfilled when the sponsor of an otherwise acceptable contention provides a brief recitation of the factors underlying the contention or references to documents and texts that provide such reasons.” *Entergy Nuclear Generation Co. et al.* (Pilgrim Nuclear Power Station), LBP-06-23, 64 N.R.C. 257, 356 (2006) (internal quotations and citations omitted). The ASLB articulated all these well-established legal principles in its decision. LBP-12-8 at 7-10.

### **LEGAL PRINCIPLES APPLIED TO RELICENSING**

NRC has developed a two step process for evaluating the environmental impacts of proposed license renewal. Step 1 consisted of issuance of the Generic Environmental Impact Statement for License Renewal of Nuclear Plants, NUREG-1437 (“GEIS”) in 1996. That document identified relevant environmental issues for license renewal and classified them into two categories. Category 1, issues whose environmental impacts were resolved generically in the GEIS, and Category 2, all other issues. 10 C.F.R. Part 51, Subpart A, Appendix B, n. 2

With regard to Category 1 issues, NRC adopted a table that established the environmental impacts for such issues generically - *i.e.* the same impact would be considered in the

environmental review for each nuclear plant and no further site-specific review was required. 10 C.F.R. Part 51, Subpart A, Appendix B. With regard to Category 2 issues, NRC determined that those issues could not be generically determined and directed that site-specific analyses be conducted for each of those issues for each license renewal application.

NRC recognized that findings in 1996 might prove to be inaccurate or incomplete over time and it directed all applicants to submit, as part of their Environmental Report in support of license renewal a discussion of any “new and significant” information that was relevant to either Category 1 or Category 2 issues. 10 C.F.R. § 51.53(c)(3)(iv). This obligation to supplement any prior environmental analysis with “new and significant information” also applies to NRC Staff. 10 C.F.R. § 51.95(c)(4).

The Commission recently reiterated criteria that should be applied in determining whether new information is significant. It held “[t]he new information must present, a seriously different picture of *the environmental impact* of the proposed project from what was previously envisioned.” *Union Elec. Co. et al.*, CLI-11-05, 74 N.R.C. \_\_\_\_, 2011 WL 4027741 (at 12) (Sept. 9, 2011) (emphasis added).

In light of the Court’s decision in *Limerick Ecology Action v. NRC*, 869 F.2d 719 (3d Cir. 1989), the Commission required applicants for license renewal to consider “alternatives to mitigate severe accidents” unless the Staff has “previously considered severe accident mitigation alternatives for the applicant’s plant in an environmental impact statement or related supplement.” 10 C.F.R. § 51.53(c)(3)(ii)(L). Although NRDC believes there is considerable basis to challenge Exelon’s assertion that the 1989 SAMDA meets the standards to absolve Exelon of the duty to prepare an analysis of “alternatives to mitigate severe accidents” (*see* Petition at 21-23), that matter is not at issue on this appeal.

## **ARGUMENT**

### **I. Introduction to Argument**

A recurring, in fact the central, theme of the two appeals is that because an NRC rule, 10 C.F.R. § 51.53(c)(3)(ii)(L), purportedly absolves Exelon of the legal obligation to conduct a SAMA, Exelon cannot be compelled to conduct a new SAMA analysis absent a waiver of that rule. The fundamental flaw in this argument is that neither NRDC's admitted Contention nor the Board's Order seek or compel Exelon to conduct a SAMA analysis. Rather, what is sought by NRDC is that Exelon properly analyze new and significant information related to the continuing applicability of the environmental conclusions stemming from the 1989 SAMDA analysis. Exelon has attempted to evaluate what it considers new information in its ER-LR and has engaged in analysis of that information, in comparison with the results of the 1989 SAMDA, to determine whether the new information is significant. As the ER-LR demonstrates, an analysis of new and significant information related to the 1989 SAMDA does not involve conducting a SAMA, although it must be a rational and defensible analysis. Exelon has not provided a rational and defensible analysis. NRDC has presented a well documented contention from nuclear experts, accepted by the Board, challenging Exelon's analysis of new information.

The cases upon which Exelon and Staff rely involve, in every instance, attempts by an intervenor to require that prior generic environmental findings, which findings were included in 10 C.F.R. Part 51, Subpart A, Appendix B, be changed in light of new and significant information. However, § 51.53(c)(3)(ii)(L) does not constitute a finding of either environmental impacts or mitigation alternatives relevant to Limerick or any other plant. It is a rule that, at most, absolves certain facilities of the obligation to prepare a new SAMA analysis if one has

been previously conducted. What Exelon and Staff seek to do is to convert the provisions of § 51.53(c)(3)(ii)(L), regarding a purported regulatory exemption for Limerick (and two other dissimilar nuclear plants) from having to conduct a new SAMA analysis, into a substantive finding of environmental impacts such as those contained in 10 C.F.R. Part 51, Subpart A, Appendix B. Neither logic nor legal precedent supports such a metamorphosis.

Finally, Exelon and NRC Staff essentially argue that NRDC's contention, even if legally permissible, fails to provide sufficient supporting evidence. Their argument ignores the full body of supporting evidence provided by NRDC's highly qualified experts which 1) identifies mitigation measures found to be potentially cost-effective at other BWR Mark II plants that were never considered for Limerick, 2) identifies the numerous substantive differences between the relevant demographic conditions at Limerick and TMI to demonstrate why Exelon's unjustified reliance on TMI's economic analysis is an unreliable methodology for use at Limerick and 3) identifies the wide range of ratios between non-economic and economic impacts from a severe accident to demonstrate that such comparisons are inherently unreliable. Rather than follow well-established Commission precedent that establishes the level of supporting evidence needed to demonstrate the existence of a genuine dispute, Exelon and NRC Staff argue that their evidence on these issues is more persuasive than NRDC's evidence, thus demonstrating the existence of the material factual dispute they assert does not exist.

## **II. Errors In Applicant's Environmental Report Related To Category 2 Issues Are Valid Subjects of Contentions**

### **A. Site-specific consideration of alternatives under NEPA are subject to challenge in NRC licensing proceedings**

By seeking to exclude from license board review Exelon's flawed analysis of new and significant information related to the site-specific 1989 SAMDA, Exelon and NRC Staff violate

a fundamental and well-established NRC requirement - *i.e.* that reviews of environmental issues are to be conducted with the same procedures and hearing processes as are safety issues. The idea that some site-specific environmental analyses, although required to be undertaken, are nonetheless not to be made a part of the licensing hearing process, was soundly rejected over 30 years ago when the court in *Calvert Cliffs* concluded:

The question here is whether the Commission is correct in thinking that its NEPA responsibilities may “be carried out in toto outside the hearing process”- whether it is enough that environmental data and evaluations merely “accompany” an application through the review process, but receive no consideration whatever from the hearing board. . . . We believe that the Commission's crabbed interpretation of NEPA makes a mockery of the Act

*Calvert Cliffs Coordinating Comm.* 449 F.2d at 1117.

The Commission has always followed this holding. *See e.g. Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 89 (1998)(“In NRC licensing adjudications . . . it is the Licensing Board that compiles the final environmental ‘record of decision,’ balances a proposed facility's benefits against its costs, and ultimately decides whether to license the facility. The adjudicatory record and Board decision (and, of course, any Commission appellate decisions) become, in effect, part of the FEIS. *See, e.g., Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 705-07 (1985). Intervenors are free to litigate the adequacy of the discussion of environmental issues in the FEIS. *See* 10 C.F.R. § 51.104(a)(2).”). Exelon and Staff offer no basis why the Commission should depart from this well-established, and legally mandated, practice by excluding a challenge to Exelon’s inadequate, and site-specific, consideration of new and significant information regarding severe accident mitigation alternatives for Limerick.

B. Public participation and ASLB hearings are a vital part of assuring that the final decision is based on an accurate and complete environmental review

By seeking to prevent an independent evaluation of the accuracy and completeness of Exelon's analysis of new and significant information, Exelon and Staff are interfering with the NEPA and NRC obligations to assure that environmental decisions are based on accurate and complete data. "Accurate scientific analysis, expert agency comments, and *public scrutiny* are essential to implementing NEPA."<sup>8</sup> Furthermore, NEPA obliges a federal agency to consider "the relevant factors" that bear on its licensing decision, including information about changes in policy or economic conditions that may impact the alternatives to the proposed action.<sup>9</sup> The consideration of alternatives is "the heart of the environmental impact statement." 10 C.F.R. 51, Subpart A, Appendix A at Section 5.

This obligation to compile a complete and accurate record regarding alternatives includes continuing obligations on an agency after it completes its initial environmental analysis to revisit its alternatives analysis, whenever there are changed circumstances, including changed economic conditions, which affect the factors relevant to the development and evaluation of alternatives.<sup>10</sup>

If there remains "major Federal action" to occur, and if the new information is sufficient to show that the remaining action will "affect the quality of the human environment" in a significant manner or to a significant extent not already considered, a supplemental EIS must be prepared.

*Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 373-374 (1989).

---

<sup>8</sup> *Native Ecosystems Council v. U.S. Forest Svc.*, 418 F.3d 953, 964 -65 (9th Cir. 2005)(emphasis added).

<sup>9</sup> *Conservation Northwest v. Rey*, 674 F. Supp. 2d 1232, 1251 (W.D. Wash. 2009).

<sup>10</sup> *Oregon Natural Resources Council Action v. U.S. Forest Service*, 445 F.Supp.2d 1211, 1224 (D. Or. 2006) (finding the agency did not satisfy its obligation and remanding for a fresh consideration of alternatives because the Forest Service used inaccurate data for market demand in developing its original NEPA analysis).

In compliance with the Supreme Court mandate in *Marsh*, the applicant for a renewed license and NRC Staff are obligated to update previous environmental impact statements to account for “new and significant” information. 10 C.F.R. §§ 51.53(c)(3)(iv), 51.95(c)(3) and 51.95(c)(4). As noted above, the adequacy of Exelon’s compliance with this mandate is a legitimate issue for consideration in the license renewal proceeding. The public, and ASLB hearings, have a crucial role to play in assuring that the final decision by the agency reflects the most accurate and complete environmental information. *Duke Energy Corporation* (“Duke Energy”) (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2) 56 N.R.C. 1, 10 (2002) (“the adequacy and accuracy of environmental analyses and proper disclosure of information are always at the heart of NEPA claims, if ‘further analysis’ is called for, that in itself is a valid and meaningful remedy under NEPA”); *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 371 (1989) (“NEPA ensures that the agency will not act on incomplete information, only to regret its decision after it is too late to correct”); *accord, Louisiana Energy Services* 47 NRC at 88 *quoting Marsh*.

C. Analysis of new and significant information related to severe accident mitigation alternatives is directly relevant to the license renewal decision

Although NEPA itself does not require that any particular action be taken, it does require that the agency considering a major federal action consider all reasonably available information to ensure that it makes the best possible decision regarding the major federal action.

The purpose here [in the EIS process] is to ensure that the “larger audience,” *ibid.*, can provide input as necessary to the agency making the relevant decisions. *See* 40 CFR § 1500.1(c) (2003) (“NEPA’s purpose is not to generate paperwork--even excellent paperwork--but to foster excellent action. The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment”).

*DOT v. Public Citizen*, 541 U.S. 752, 768-769 (U.S. 2004)(footnotes omitted). In addition, as the ASLB found “NEPA requires the NRC to take a ‘hard look’ at alternatives, including SAMAs, and to provide a rational basis for rejecting alternatives that are cost-effective.” LBP-12-8 at 8-9 (footnote omitted) *citing Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989) and *Limerick*, 869 F.2d at 737; *see also Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 and 3) LBP-11-17, *interlocutory review denied* CLI-11-14.

Of most importance here, considerations of alternatives and of new and significant information that bears on previous environmental analyses of alternatives must be included in the NRC proceeding that is considering the merits of the major federal action. “NEPA was meant to do more than regulate the flow of papers in the federal bureaucracy. The word ‘accompany’ in Section 102(2) (C) must not be read so narrowly as to make the Act ludicrous. It must, rather, be read to indicate a congressional intent that environmental factors, as compiled in the ‘detailed statement,’ be considered through agency review processes.” *Calvert Cliffs*, 449 F.2d at 118.

D. 10 C.F.R. § 51.53(c)(3)(ii)(L) does not exempt, from ASLB review, Exelon’s analysis of new and significant information related to the site-specific 1989 SAMDA

In its ER-LR Exelon attempts to evaluate new information and its significance as it relates to NRC’s 1989 supplement to the Final EIS related to the initial operating license for Limerick Units 1 and 2 (“1989 SAMDA”). The 1989 SAMDA was a site-specific analysis of severe accident mitigation alternatives. ER-LR at 5-4 to 5-9. Exelon concedes that the purpose of its current analysis is to “assess whether [there is] new information that would suggest the need to evaluate additional severe accident mitigation alternatives”). ER-LR at 5-4. Thus, Exelon admits that even if the effect of § 51.53(c)(3)(ii)(L) is to absolve it of doing an entirely new SAMA, it is still obligated to update that analysis with new and significant information in

order to determine whether additional mitigation alternatives need to be evaluated. Curiously, NRC Staff argues that “Contention 1-E, as admitted by the Board, does not claim that any new and significant information challenges subsection L or its underlying rationale. As a result, Contention 1-E is not material to any findings the NRC Staff must make regarding this application, and the Board erred by admitting it.” NRC Staff Appeal at 11. Of course the reason Contention 1E does not challenge subsection L, is that the contention is not about subsection L. It is about new and significant information, an obligation imposed on all prior environmental impact statements that relate to a major federal action, prior to a decision about that action.

Nonetheless, Exelon and NRC Staff assert that no challenge can be made to its evaluation of substantial new information that relates to the 1989 SAMDA in this licensing proceeding, absent a waiver under 10 C.F.R. § 2.335.<sup>11</sup> The asserted basis for this radical suggestion is the mere existence of the underlying 1989 SAMDA and the claimed relief Subsection L provides Exelon from the obligation to prepare a SAMA in connection with Limerick relicensing. However, that argument makes no sense for several reasons.

1. 10 C.F.R. § 51.53(c)(3)(ii)(L) is not at issue

First, 10 C.F.R. § 51.53(c)(3)(ii)(L) says nothing about excusing Exelon from its obligations under 10 C.F.R. § 51.53(c)(3)(iv) to update its prior environmental analyses with

---

<sup>11</sup> Exelon and NRC Staff repeatedly assert that NRDC should have filed for a waiver of § 51.53(c)(3)(ii)(L) and, impliedly, that it is too late to do so at this time. Since NRDC successfully argued to the ASLB that no waiver is required because Contention 1E does not contravene any Commission Regulation, no duty could be imposed on NRDC to file for a waiver at least until, and if, the Board’s decision is overturned. Also, there is nothing to which a § 2.335 waiver provision could apply. Since NRDC is not seeking in Contention 1E to require that Exelon conduct a SAMA analysis, the provisions of § 51.53(c)(3)(ii)(L) are not at issue. In addition, Exelon and Staff insistence that NRDC use § 2.335 is, at best, disingenuous since they obviously believe that if the section were invoked NRDC would not prevail, otherwise why insist on use of its highly restrictive provisions.

new and significant information, nor about making Exelon's meager efforts to comply with § 51.53(c)(3)(iv) immune from challenge in a license renewal proceeding. To address this reality Exelon and NRC Staff substantially shift their emphasis from the arguments made to the ASLB, which focused on the assertion that by doing the 1989 SAMDA the issue of mitigation alternatives had been magically converted from a Category 2 to a Category 1 issue, and from a site-specific issue to a generic issue.<sup>12</sup> Now they more broadly assert that anytime a rule excuses an applicant from conducting an otherwise required environmental analysis because it has done the analysis previously, the consideration of new and significant information with regard to the original environmental analysis is immune from challenge in individual licensing proceedings absent a waiver under 10 C.F.R. § 2.335. This assertion has no merit. No NRC rule says this directly or indirectly, while existing rules clearly do require applicants for renewed licenses, including Exelon, to review their SAMA conclusions, and all other prior environmental analyses, in the light of new and significant information that they have uncovered on their own, or that is presented to them in the course of the NEPA process.

Moreover, this speculative and tenuous argument produces an irrational result. The only time new and significant information logically has to be considered is when there is a prior environmental analysis. It was just such a prior impact statement that the Supreme Court analyzed in *Marsh*, and it is just such prior impact statements that are the subject of NRC's regulations on new and significant information and the need for supplemental impact statements after impact statements have already been prepared. 10 C.F.R. §§ 51.53(c)(3)(iv), 51.95(c)(3)

---

<sup>12</sup> The only time Exelon framed its argument in terms of its current claim - i.e. that any time the Commission has a rule that relates to an environmental analysis no challenge can be made to the content of that analysis even if the rule does not adopt any environmental findings - was briefly and cryptically in its papers and arguments below. See Exelon Opp. To Intervention

and 51.95(c)(4). The mere fact that no new impact statement is required to be prepared cannot be the basis for insulating the updating of that prior impact statement from review in a proceeding in which a proposed major federal action is being considered.

Exelon's ER-LR builds on prior environmental analyses and updates those analyses with new and significant information. *See e.g.* ER-LR at 2-10 to 2-12 (relying on ER-OL analysis of Schuylkill River pollution and updating it with subsequent events) and 2-17 to 2-19 (updating historical data on relevant waterways as initially contained in the ER-OL). Similarly a FSEIS will be prepared in this case that will build on the prior EIS prepared in support of the operating license. *See e.g.* 10 C.F.R. Part 51, Subpart A, Appendix A at Section 1(b) allowing tiering of prior impact statements in new impact statements to avoid unnecessary repetition. Nonetheless, contention's challenging these updated environmental analyses are routinely heard in license renewal proceedings.

## 2. Case law does not support Exelon and Staff arguments

Exelon and NRC Staff also rely on four prior NRC decisions. *Entergy Nuclear Generation Co. & Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station) and *Entergy Nuclear Vermont Yankee, LLC. & Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), CLI-07-03, 65 NRC 13, 16 (2007); *Entergy Nuclear Generation Co.* (Vt. Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 149 (2006); *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), LBP-06-23, 64 NRC 257, 288 (2006); and *Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 & 4), CLI-01-17, 54 NRC at 3, 12 (2001). Exelon Appeal at 1, n. 3 and 20, n. 92. As the ASLB cogently explained, and as Exelon notes, the prior cases that have addressed this issue, have held that challenges based on

---

at 33 and Transcript of March 21, 2012 hearing at 48.

new information attempting to alter previously adopted generic findings of environmental impacts, findings universally identified by rule *as Category 1 issues*, are not allowed to be raised in individual licensing proceedings. LBP-12-8 at 13 (“It is readily apparent that the Pilgrim, Vermont Yankee, and Turkey Point decisions are inapplicable to the instant proceeding. All three of these cases involved petitioners submitting contentions regarding issues – spent fuel storage and the release of radiological, chemical and herbicidal materials – that Part 51 explicitly declares Category 1. In contrast, the contention in this proceeding, challenging an analysis of new and significant information regarding SAMAs, raises a Category 2 issue” (footnote omitted); Exelon Appeal at 16 (“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 related to Category 1 issues.”).

In all four cases the ASLB and/or the Commission focused on two critical factors, neither of which is applicable here. First, in those cases the challenge was to a finding of an environmental impact that the Commission had generically determined, by adopting the finding as a rule, could be established for use at all plants seeking license renewal. *See Entergy Nuclear Vt. Yankee LLC*, 65 N.R.C. at 16 (“The Mass AG’s contention says that new information calls into question previous NRC findings on the environmental impacts of fires in spent fuel pools. The Mass AG contention challenges one of the findings in the Generic Environmental Impact Statement (GEIS) for license renewal . . . In each of the challenged decisions, the Licensing Board found the contention inadmissible. Both Boards found the GEIS finding controlling absent a waiver of the NRC’s generic finding or a successful petition for rulemaking. We conclude that the Boards’ interpretation of the law and regulations concerning generic, or “category one,” environmental findings is consistent with Turkey Point and we affirm both rulings” (footnotes

omitted)).

Second, the Commission had, by rule, determined that the environmental impact finding challenged in those case was addressing a Category 1 issue, which, is defined by rule, to only includes issues for which, *inter alia*, “the analysis reported in the Generic Environmental Impact Statement has shown . . . [t]he environmental impacts associated with the issue have been determined to apply either to all plants or, for some issues, to plants having a specific type of cooling system or other specified plant or site characteristic.” 10 C.F.R. Part 51, Subpart A, Appendix B, n. 2. *See Entergy Nuclear Vt. Yankee LLC*, 65 N.R.C. at 16. The decisions in those cases, relying on these two factors concluded the only use for new and significant information in those cases, and the use sought by intervenors, was to alter the generic finding that had been adopted by rule and resulted in a classification of the issue as Category 1. Thus, the Boards and the Commission concluded that since the finding that was sought to be changed was a generic finding, which had been adopted by rule, the only way to alter that finding based on new and significant information was to seek an amendment to the rule, or a waiver of the rule. *Id.*<sup>13</sup>

Neither factor is present here. Exelon and NRC Staff rely on § 51.53(c)(3)(ii)(L). But, it

---

<sup>13</sup> Exelon and Staff only cite to cases and regulatory history which reference limitations on appropriate issues for licensing hearings in the context of either generic environmental impact findings, codified in a rule, or Category 1 issues which, are by rule, limited to environmental impact findings that have been generically determined. They offer no authority for the proposition that when new and significant information is evaluated with regard to site-specific or Category 2 issues, that evaluation is immune from challenge in a license renewal proceeding. Similarly, their criticism of the Board’s focus on the Category 1/Category 2 issue in LBP-12-8 is baseless. Exelon and Staff attempted to fit this case into the criteria used in the *Vermont Yankee, Pilgrim and Turkey Point*. As noted in the text those cases relied on the fact that the intervenor was seeking to require a modification of a generic, Category 1, finding, based on new and significant information. Even if the status of those issues as Category 1 is ignored, the reasoning of those three opinions turned on the generic nature of the finding which the intervenor sought to alter. NRDC does not seek to alter any generic finding. It seeks to do what Exelon said it was doing, *i.e.* “to assess whether new information that would suggest the need to evaluate additional

does not make any environmental findings and as noted above, and as Exelon concedes, the rule addresses one issue - whether Exelon (and the license holders for Comanche Peak and Watts Bar) are obligated to conduct a SAMA analysis. A challenge to the rule would only occur if NRDC asserted Exelon is required to do a SAMA. NRDC makes no such claim.<sup>14</sup>

In addition, the issue of severe accident mitigation alternatives is determined, by rule, to be a Category 2 issue. Completing the required analysis does not convert the Category 2 issue into a Category 1 issue. Even the language of § 51.53(c)(3)(ii)(L) identifies the severe accident mitigation alternatives analysis as a Category 2 issue, excusing an applicant from conducting a SAMA if, and only if, NRC Staff has previously conducted a SAMA analysis “for the applicant’s plant”.

The 1989 SAMDA, and Exelon’s review in ER-LR at 5-4 to 5-9, demonstrate that the 1989 SAMDA does not fit the first test of a Category 1 issue because the 1989 SAMDA did not find “environmental impacts associated with the issue have been determined to apply either to all plants or, for some issues, to plants having a specific type of cooling system or other specified plant or site characteristic”. Part 51, Subpart A, Appendix B, n. 2. For example, Exelon does not even claim the 1989 SAMDA has been relied upon in any other BWR Mark II facility. Nor can the three disparate nuclear plants covered by Subsection L plausibly be construed as themselves constituting a particular “class” of plants, having certain common environmental or technical attributes that are the ostensible object of a purported “generic” determination in

---

severe accident mitigation alternatives has become known” (ER-LR at 5-4) but to do it correctly.

<sup>14</sup> Even NRDC’s rejected Contention 3E did not seek to have a new SAMA analysis conducted by Exelon but argued instead that the 1989 SAMDA was not the “previously considered severe accident mitigation alternatives for the applicant’s plant in an environmental impact statement or related supplement” required by § 51.53(c)(3)(ii)(L). Petition at 21.)

Subsection L.<sup>15</sup>

In its decision in *Limerick* the Third Circuit definitively determined that consideration of severe accident mitigation alternatives cannot be a generic issue and must be treated on a site-specific basis. Its controlling precedent concluded:

Because the potential consequences will largely be the product of the location of the plant, the risk will vary tremendously across all plants. As the NRC itself has noted, “the population distribution in the vicinity of the site affects the magnitude and location of potential consequences from radiation releases.” 48 Fed.Reg. at 16,020.

This is particularly true for plants such as Limerick which were built near densely populated areas. The FES noted that “the [Limerick] site is substantially higher than average in terms of population density,” FES at 1-4, and that approximately seven million persons are expected to live within fifty miles of Limerick in the year 2000. Id. at 5-98. In other words, the same probability of the same accident in a plant such as Limerick will produce a higher risk than that produced by the same accident at a plant not located within twenty-five miles of a major metropolitan area.FN23 Therefore, it is unlikely that severe accident mitigation can be treated as a generic issue.

*Limerick*, 869 F.2d at 738-39.

Thus, the essential factors relied upon by the Commission and the ASLBs in the decisions cited by Exelon and Staff are not present in this proceeding. Contention 1E does not relate to a Category 1 issue and does not relate to a generic issue. It focuses on site-specific analyses by Exelon intended to evaluate the significance of new information related to a previous

---

<sup>15</sup> It is ironic that although Exelon and NRC Staff base their primary argument on the proposition that Commission rules may not be challenged in individual licensing proceedings absent a waiver, their argument cannot prevail unless the Commission abrogates its own rules including 10 C.F.R. § 51.53(c)(3)(iv) requiring that new and significant information be properly addressed in the ER, 10 C.F.R. Part 51, Subpart A, Appendix B classifying the SAMA analysis, regardless of when it is done, as a Category 2 issue, and Appendix B, n. 2, defining Category 1 issues to exclude any analysis that must be done on a site-specific basis.

site-specific analysis of severe accident mitigation alternatives for Limerick.

3. Consideration of new and significant information related to the 1989 SAMDA does not require Exelon to conduct a SAMA analysis

Exelon and NRC Staff erroneously assume that consideration of new and significant information that is relevant to the previously conducted 1989 SAMDA, necessarily requires that Exelon conduct a new SAMA, and therefore that this is what NRDC *must* be seeking and is required to seek via a waiver of the Commission's regulations. This argument is at least three-steps removed from the facts. First, the assumption regarding the necessity of a new SAMA in order to evaluate new and significant information is demonstrably wrong, as the ER-LR itself illustrates. With regard to four items of new information, Exelon evaluated the significance of that information and claims it did so without conducting a new SAMA. ER-LR at 5-4 to 5-9.

Second, while NRDC believes the ER-LR analysis was flawed in some, but not all, ways (*see* Petition at 16-19), NRDC did not, and does not, assert that testing the significance of the appropriate inventory of new information requires a new SAMA analysis.

Third, there is no dispute that the test of significance of new information is whether it presents "a seriously different picture of the environmental impact of the proposed project from what was previously envisioned." *Union Elec. Co. et al.*, 2011 WL 4027741 at 12 (Sept. 9, 2011). Exelon will need to do a competent analysis that is capable of answering that question. How Exelon chooses to deal with the deficiencies in its current analysis of new and significant information will be, in the first instance, up to Exelon and it would be a mistake to speculate, as Exelon and NRC Staff have done, that the only solution is to conduct a SAMA.

4. Regulatory history does not support Exelon's radical views

Exelon attempts to find support for its radical views in the regulatory history of 10 C.F.R.

§ 51.53(3)(c) placing principal reliance on statements made in SECY-93-032. ML072260444, 10 CFR Part 51 Rulemaking On Environmental Review For Renewal Of Nuclear Power Plant Operating Licenses. The focus of this reliance is a statement in the SECY that “Litigation of environmental issues in a hearing will be limited to unbounded category 2 and category 3 issues” (SECY-93-032 at 4) and then equating the provisions of § 51.53(c)(3)(ii)(L) as placing Exelon in a “bounded” category. What Exelon ignores is the Commission’s interpretation of what is a “bounded” category 2 issue. In the draft of § 51.53(c)(3) the Commission described a “bounded” category 2 issue as one where “NRC reached a conclusion about *this impact* that applies to all affected plants that are within certain bounds.” 56 Fed. Reg. 47016 (September 17, 1991) Environmental Review for Renewal of Operating Licenses (emphasis added). The provisions of § 51.53(c)(3)(ii)(L) do not contain a finding of any impact nor, as the ASLB indicated in its opinion, is there any mention in the regulatory history or the regulation that the existence of previous SAMA analysis either converts a Category 2 status to a Category 1 status or that discussion of new and significant information relevant to the previous analysis is precluded from the hearing. LBP-12-8 at 13-15. In its 1991 proposed rule the Commission made clear that “The Commission is proposing to limit the scope of environmental review for each plant license renewal to only those impacts for which no generic conclusion could be reached”. 56 Fed. Reg. 47016. The 1989 SAMDA reaches no conclusion that any impact, or mitigation alternative, is being generically resolved.

In sum, neither Exelon nor NRC Staff provides any persuasive argument that the ASLB erred in admitting Contention 1E. That ruling confirmed that when an applicant analyzes new and significant information relevant to a previously conducted site-specific environmental report, in order to determine whether to amend the previous report, a properly framed contention

challenging the adequacy of the new and significant analysis is entitled to be heard by the ASLB in the licensing renewal proceeding.

### **III. Contention 1E Meets All Other Contention Admissibility Criteria**

Exelon challenges one of the two bases for Contention 1E,<sup>16</sup> asserting that the Board failed to give sufficient credence to Exelon's counter-arguments opposing the second basis offered in support of Contention 1E - *i.e.* "Exelon's reliance on data from TMI in its analysis of the significance of new information regarding economic cost risk constitutes an inadequate analysis of new and significant information." LBP-12-8 at 40. As Exelon's Appeal makes abundantly clear, even with its distorted representation of the underlying evidence, this is a dispute that goes to the merits of NRDC's contention basis. Exelon Appeal at 22-27.

In their truncated analysis of the evidence, Exelon and Staff ignore the fact that NRDC has provided specific statements, adequate bases, supporting facts and has made references to specific sources and documents concerning two key bases for contention 1E: lack of consideration of other severe accident mitigation alternatives, and analysis of economic impacts of a severe accident:

1. Exelon was found by the ASLB to be in error in equating a requirement that it consider other new and significant severe accident mitigation alternatives for BWRs with performing an entirely new SAMA analysis. LBP-12-8 at 19. In its technical declaration, NRDC carefully listed a menu of SAMA candidates found to be cost-beneficial at other plants, and contrasted these findings with the 1989 SAMDA which considered a cost-benefit analysis for only seven mitigation alternatives. NRDC Expert Declaration at 3-9.
2. Exelon concedes that an analysis of the economic impact of a severe accident was not

---

<sup>16</sup> The provisions of 10 C.F.R. § 2.311 clearly prohibit consideration on appeal of any issue the resolution of which will not result in the "petition" being "wholly denied". Thus, Exelon's arguments on one of two bases for Contention 1E, should not be addressed by the Commission, particularly since Exelon did not seek an interlocutory review of the otherwise unappealable portion of LBP-12-8 as contemplated by § 2.341(f) nor seek to meet its requirements.

included in the 1989 SAMDA and economic impacts are new information that need to be evaluated to determine whether the results of the 1989 SAMDA need to be changed. ER-LR at 5-8

3. The flaw in the economic analysis by Exelon was its reliance on the economic risk analysis from an entirely different plant in a different location with a different demographic to create a ratio between radiological and economic impacts. NRDC identified numerous ways in which that comparison was inappropriate, including identifying the wide variation among plants of the metric upon which Exelon relied - i.e. the ratio between radiological and economic impacts. NRDC Expert Declaration at 18-19. NRDC did not state that it would be appropriate to use the average or mean of those values to come up with a reliable surrogate for the missing economic analysis and disagrees with the appropriateness of averaging the ratio of economic and radiological consequences across different reactors to gauge economic risk for Limerick. It is noteworthy that unlike Exelon, NRDC limited its consideration of potentially relevant plants to BWRs, flagging the importance of the differences in accident scenarios between BWRs and PWRs, like the TMI facility on which Exelon relied. *Id.*

4. NRDC went further to identify in detail unique demographic and economic features in the area surrounding Limerick including dense urban populations, substantial total income levels throughout the 50 mile impact area, the level of agricultural use of the surrounding land and the unique additional costs that can be incurred in a clean up of a large and densely populated urban area, like Philadelphia, as compared to the more rural and less populated area surrounding TMI. *Id.* at 19-22.<sup>17</sup>

In addition, while NRDC went through a detailed analysis to demonstrate the substantial unique demographic features of the Limerick site as compared to the more rural setting of TMI, Exelon chose to use the TMI economic analysis without a single word to justify why it was an appropriate surrogate for the Limerick economic analysis. ER-LR at 5-8. That failing alone is sufficient basis to challenge the adequacy of Exelon's treatment of the new information regarding the importance of an economic impact analysis of severe accidents.

NRC Staff argues that Contention 1E fails to identify errors which, if corrected, would make a difference in the outcome. First, Exelon has already indicated that the purpose of its new

---

<sup>17</sup> These and similar site-specific factors are the very reasons why an analysis of severe accident mitigation alternatives cannot be done generically and why consideration of severe accident mitigation alternatives was, and remains, a Category 2 issue.

and significant information analysis was to see *if there were* other mitigation measures that might need to be evaluated. ER-LR at 5-4. The Staff argument transforms the desired *end product* of a NEPA new and significant information analysis into a prior condition on its pursuit, an approach which mistakenly conflates the contention admissibility and evidentiary hearing phases of the NRC's multi-step contention adjudication process, as discussed above. Second, NRDC identified a number of mitigation alternatives relevant to the Mark II BWR that have been found to be potentially cost-effective at other plants that were never considered in the 1989 SAMDA.<sup>18</sup> NRDC Expert Declaration at 3-9. None of these were part of Exelon's ER-LR analysis.

### CONCLUSION

Exelon and Staff urge the Commission to insulate from intervenor challenge and ASLB review, an applicant's and the Staff's consideration of new and significant information for any severe accident mitigation alternative analyses, regardless of how old it might be and regardless of how much potential new and significant information may exist that could alter the conclusions of the previous analyses. Were the Commission to accept Exelon and Staff arguments it would have to overturn over 40 years of unbroken Commission and federal court precedent holding that all

---

<sup>18</sup> NRC Staff asserts that a number of ongoing NRC programs, including IPE, IPEEE and new information contained in a draft proposed GEIS modification, will have uncovered any possible cost-effective mitigation measures and that such measures, even if they exist, are likely to be minor modifications with little real benefit. NRC Staff Appeal at 14, n. 71. Staff ignores the real world evidence, as discussed in NRDC's Expert Declaration (pp. 3-9), that despite all these considerations, numerous potentially cost-effective mitigation alternatives have been identified for Mark II BWR plants, none of which have been considered for Limerick. In addition, at the Indian Point site, also surrounded by a substantial population and substantial economic development, the SAMA analysis has identified at least 20 potentially cost effective SAMAs where the benefit is substantially greater than the projected cost. *See Entergy Nuclear Operations, Inc.*(Indian Point Nuclear Generating Units 2 and 3) LBP-11-17 at 12-13. As the Court observed in *Limerick* the much greater population density is likely to increase the human and environmental cost of a severe accident and make more mitigation alternatives cost effective. *Limerick*, 869 F.2d at 738-39.

environmental analyses that relate to site-specific environmental issues are subject to challenge by an intervenor and review by an ASLB. Exelon and Staff offer no cases, no regulatory history and no logic that support such a radical and illegal departure from well-established NEPA law. The Commission should reject the appeal.

Respectfully Submitted,

s/ (electronically signed)  
Anthony Z. Roisman  
National Legal Scholars Law Firm, P.C.  
241 Poverty Lane, Unit 1  
Lebanon, NH 03766  
603-443-4162  
[aroisman@nationallegalscholars.com](mailto:aroisman@nationallegalscholars.com)

s/(electronically signed)  
Geoffrey H. Fettus  
Natural Resources Defense Council  
1152 15<sup>th</sup> Street, NW, Suite 300  
Washington, D.C. 20005  
202-289-2371  
[gfettus@nrdc.org](mailto:gfettus@nrdc.org)

Filed this date of April 26, 2012

**CERTIFICATE OF SERVICE**

I hereby certify that copies of the foregoing *Response to Appeal of LBP-12-08* in the captioned proceeding were served via the Electronic Information Exchange (EIE) on the 26<sup>th</sup> day of April 2012, which to the best of my knowledge resulted in transmittal of same to those on the EIE Service List for the captioned proceeding.

Administrative Judge  
William J. Froehlich, Chair  
Atomic Safety and Licensing Board  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001  
E-mail: William.Froehlich@nrc.gov

U.S. Nuclear Regulatory Commission  
Office of the Secretary of the Commission  
Mail Stop: O-16C1  
Washington, DC 20555-0001  
hearingdocket@nrc.gov

Administrative Judge  
Dr. William E. Kastenberg  
Atomic Safety and Licensing Board  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001  
E-mail: William.Kastenberg@nrc.gov

Office of Commission Appellate Adjudication  
U.S. Nuclear Regulatory Commission  
Mail Stop: O-16C1  
Washington, DC 20555-0001  
E-mail: OCAAMail@nrc.gov

Administrative Judge  
Michael F. Kennedy  
Atomic Safety and Licensing Board  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001  
E-mail: Michael.Kennedy@nrc.gov

Matthew Flyntz  
Law Clerk  
Atomic Safety and Licensing Board  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001  
E-mail: [Matthew.Flyntz@nrc.gov](mailto:Matthew.Flyntz@nrc.gov)

Alex S. Polonsky  
Kathryn M. Sutton  
Anna V. Jones  
Morgan, Lewis & Bockius LLP  
1111 Pennsylvania Avenue, NW  
Washington, DC 20004  
E-mail: [apolonsky@morganlewis.com](mailto:apolonsky@morganlewis.com)

J. Bradley Fewell  
Vice President and Deputy General Counsel  
Exelon Generation Company, LLC  
200 Exelon Way  
Kennett Square, PA 19348  
E-mail: [Bradley.Fewell@exeloncorp.com](mailto:Bradley.Fewell@exeloncorp.com)

Office of the General Counsel  
U.S. Nuclear Regulatory Commission  
Mail Stop O-15D21  
Washington, DC 20555-0001  
[OGCMailCenter@nrc.gov](mailto:OGCMailCenter@nrc.gov)  
Catherine Kanatas  
[Catherine.Kanatas@nrc.gov](mailto:Catherine.Kanatas@nrc.gov)  
Brian Newell  
[Brian.Newell@nrc.gov](mailto:Brian.Newell@nrc.gov)  
Maxwell Smith  
[Maxwell.Smith@nrc.gov](mailto:Maxwell.Smith@nrc.gov)  
Mary Spencer  
[Mary.Spencer@nrc.gov](mailto:Mary.Spencer@nrc.gov)  
Ed Williamson  
[Edward.Williamson@nrc.gov](mailto:Edward.Williamson@nrc.gov)  
Lauren Woodall  
[Lauren.Woodall@nrc.gov](mailto:Lauren.Woodall@nrc.gov)

/Signed (electronically) by/  
Geoffrey H. Fettus