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

In the Matter of	)	
	)	Docket Nos. 52-018 and 52-019
DUKE ENERGY CAROLINAS, LLC	)	
	)	July 22, 2008
(William States Lee III Nuclear Station, Units 1 and 2)	)	

DUKE ENERGY CAROLINAS, LLC'S ANSWER OPPOSING PETITION FOR INTERVENTION AND REQUEST FOR HEARING BY THE BLUE RIDGE ENVIRONMENTAL DEFENSE LEAGUE

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I. INTRODUCTION

In accordance with 10 C.F.R. § 2.309(h), Duke Energy Carolinas, LLC, applicant in the above-captioned matter ("Duke" or "Applicant"), hereby files its Answer to the Petition for Intervention and Request for Hearing ("Petition") filed on June 27, 2008, by the Blue Ridge Environmental Defense League ("BREDL" or "Petitioner"). The Petition responds to the Nuclear Regulatory Commission's ("NRC" or "Commission") "Notice of Hearing and Opportunity to Petition for Leave to Intervene," published in the *Federal Register* on April 28, 2008 (73 Fed. Reg. 22,978) ("Hearing Notice") concerning Duke's application for a combined license ("COL") to construct and operate two AP1000 pressurized water reactors at the William States Lee III Nuclear Station ("WLS") site in Cherokee County, South Carolina.

As discussed below, Petitioner has not satisfied the Commission's requirements to intervene in this matter, having failed to proffer at least one admissible contention. Therefore, pursuant to 10 C.F.R. § 2.309, the Petition should be denied.

II. BACKGROUND

On December 12, 2007, as supplemented by letters dated January 28, 2008, February 6, 2008, and February 8, 2008, Duke submitted an application to the NRC for a COL for WLS Units 1 and 2 ("Application" or "COL Application").[1] The NRC accepted the Application for docketing on February 25, 2008, and published a Hearing Notice on April 28, 2008.[2] The Commission 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 Notice (*i.e.*, June 27, 2008) in accordance with 10 C.F.R. § 2.309.[3] BREDL filed its Petition on June 27, 2008.[4]

To be admitted as a party to this proceeding, BREDL must demonstrate standing and submit at least one admissible contention.[5] Duke does not object to BREDL's standing in this

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1 *See* Notice of Receipt and Availability of Application for a Combined License, 73 Fed. Reg. 6218 (Feb. 1, 2008).

2 Acceptance for Docketing of an Application for Combined License for William States Lee III Units 1 and 2, 73 Fed. Reg. 11,156 (Feb. 29, 2008); Hearing Notice, 73 Fed. Reg. at 22,978. The Hearing Notice referenced the name of the Applicant as "Duke Energy"; however, NRC published a correction to the Notice in the *Federal Register* on June 17, 2008 referring to the Applicant as "Duke Energy Carolinas, LLC." *See* Correction to Notice of Hearing and Opportunity To Petition for Leave To Intervene and Order Imposing Procedures for Access to Sensitive Unclassified Non-Safeguards Information and Safeguards Information for Contention Preparation on a Combined License for the William States Lee III Units 1 and 2, 73 Fed. Reg. 34,348 (June 17, 2008).

3 Hearing Notice, 73 Fed. Reg. at 22,979. In addition, the Hearing Notice imposed procedures for access to sensitive unclassified non-safeguards information ("SUNSI") and safeguards information ("SGI") for purposes of contention preparation. *Id.* at 22,980-81. However, no one requested access to such information within the deadline set forth in the Notice.

4 According to the automated notice sent by the NRC's Electronic Information Exchange ("EIE"), the Petition and the Notice of Appearance were submitted through the EIE and arrived on June 27, 2008 at 11:48 p.m. and 11:55 p.m., respectively. However, the Attachment to the Petition containing Declarations from BREDL members regarding standing arrived on June 28, 2008, at 12:03 a.m. Thus, it appears that, with respect to the standing Declarations, BREDL failed to meet the submission deadline set forth in the Hearing Notice. *See* 73 Fed. Reg. at 22,979. Given that this failure may have been caused by problems with the EIE, Duke does not object to the tardiness of the Declarations. Nonetheless, Duke reserves the right to challenge any future untimely filings that are the result of BREDL waiting until the eleventh-hour to serve its documents.

5 *See* 10 C.F.R. § 2.309(a).

proceeding. As discussed in Section III below, however, BREDL has not submitted any admissible contentions. Therefore, the Petition should be denied in its entirety.

III. PETITIONER HAS NOT PROFFERED AN ADMISSIBLE CONTENTION

A. Applicable Legal Standards and Relevant NRC Precedent

As explained above, to intervene in an NRC licensing proceeding, a petitioner must propose at least one admissible contention.[6] Under 10 C.F.R. § 2.309(f)(1), a hearing request "must set forth with particularity the contentions sought be raised." In addition that section 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; (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.[7]

The purpose of these six criteria is to "focus litigation on concrete issues and result in a clearer and more focused record for decision."[8] The NRC will deny a petition to intervene and request for hearing from a petitioner who has standing but has not proffered at least one admissible contention.[9] The Commission has stated that it "should not have to expend resources

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6 *Id.*

7 *See* 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 Petitioner's Proposed Contentions in this proceeding.

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

9 *Fla. Power & Light Co.* (Turkey Point Nuclear Power Plant, Units 3 & 4), CLI-01-17, 54 NRC 3, 26 (2001).

to support the hearing process unless there is an issue that is appropriate for, and susceptible to, resolution in an NRC hearing."[10]

This results in rules on contention admissibility that are "strict by design."[11] 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.'"[12] Thus, failure to comply with any one of the six admissibility criteria is grounds for rejecting a proposed contention.[13]

The legal standards governing each of the six pertinent criteria from 10 C.F.R. § 2.309(f)(1) are discussed below.

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

A petitioner must provide "a specific statement of the issue of law or fact to be raised or controverted."[14] The petitioner must "articulate at the outset the specific issues [it] wish[es] to litigate as a prerequisite to gaining formal admission as [a party]."[15] Namely, an "admissible contention must explain, with specificity, particular safety or legal reasons requiring rejection of the contested [application]."[16] The contention rules "bar contentions where petitioners have only 'what amounts to generalized suspicions, hoping to substantiate them later.'"[17]

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10 Final Rule, Changes to Adjudicatory Process, 69 Fed. Reg. at 2202.

11 *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 & 3), CLI-01-24, 54 NRC 349, 358 (2001) (citing *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, & 3), CLI-99-11, 49 NRC 328, 334 (1999)).

12 *Id.*

13 *See* Final Rule, Changes to Adjudicatory Process, 69 Fed. Reg. at 2221; *see also Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325 (1999).

14 10 C.F.R. § 2.309(f)(1)(i).

15 *Oconee*, CLI-99-11, 49 NRC at 338.

16 *Millstone,* CLI-01-24, 54 NRC at 359-60.

17 *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).

2. Petitioner Must Briefly Explain the Basis for the Contention

A petitioner must provide "a brief explanation of the basis for the contention."[18] This includes "sufficient foundation" to "warrant further exploration."[19] 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."[20] The Board, however, must determine the admissibility of the contention itself, not the admissibility of individual "bases."[21]

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 within the scope of [the] proceeding."[22] In other words, "[a] contention's proponent, not the licensing board, is responsible for formulating the contention and providing the necessary information to satisfy the basis requirement for the admission of contentions."[23]

3. 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."[24] The scope of the proceeding is defined by the Commission's notice of opportunity for a hearing.[25] Moreover, contentions are necessarily limited to issues that are

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18 10 C.F.R. § 2.309(f)(1)(ii); *see* Final Rule, Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, 54 Fed. Reg. 33,168, 33,170 (Aug. 11, 1989).

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

20 *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).

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

22 *Balt. Gas & Elec. Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 & 2), CLI-98-14, 48 NRC 39, 41 (1998).

23 *Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18, 22 (1998).

24 10 C.F.R. § 2.309(f)(1)(iii).

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

germane to the specific application pending before the Licensing Board.[26] Any contention that falls outside the specified scope of the proceeding must be rejected.[27]

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."[28] 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.[29] 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.[30]

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.[31] Accordingly, a contention that simply states the petitioner's views about what regulatory policy should be does not present a litigable issue.[32]

When an applicant references a standard design certification, Commission regulations limit the scope of a COL proceeding as follows: "Except as provided in 10 C.F.R. § 2.335, in making the findings required for issuance of a combined license . . . the Commission shall treat

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

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

28 *See* 10 C.F.R. § 2.335(a).

29 *See 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 Final Policy Statement, Conduct of New Reactor Licensing Proceedings*, 73 Fed. Reg. 20,963, 20,972 (Apr. 17, 2008) ("New Reactor Policy Statement").

30 *See Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 & 4), LBP-01-6, 53 NRC 138, 159, *aff'd*, CLI-01-17, 54 NRC 3 (2001).

31 *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), LBP-07-11, 65 NRC 41, 57-58 (citing *Phila. Elec. Co.* (Peach Bottom Atomic Power Station, Units 2 & 3), ALAB-216, 8 AEC 13, 20 (1974)).

32 *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 III.A.7 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.

as resolved those matters resolved in connection with the issuance or renewal of a design certification rule."[33] Appendix D to 10 C.F.R. Part 52 specifies the matters that are considered to be resolved in a COL proceeding that references the AP1000 standard design certification. Issues that are considered to be resolved include all nuclear safety issues associated with the design information in the AP1000 Design Control Document ("DCD").[34] Thus, any challenges to the AP1000 design are outside the scope of this proceeding.[35]

Furthermore, challenges to the NRC Staff's safety review are outside the scope of this proceeding because "[t]he adequacy of the applicant's license application, not the NRC staff's safety evaluation, is the safety issue in any licensing proceeding, and under longstanding decisions of the agency, contentions on the adequacy of the [content of the] SER are not cognizable in a proceeding."[36]

4. 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."[37] The standards defining the findings that the NRC must make to support issuance of a COL in this proceeding are set forth in 10 C.F.R. §§ 51.107 and 52.97. As the Commission has observed, "[t]he dispute at issue is 'material' if its resolution would 'make a difference in the outcome of

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33 10 C.F.R. § 52.63(a)(5). *See also* 10 C.F.R. § 52.83(a).

34 10 C.F.R. Part 52, App. D, § VI.B.

35 *See* 10 C.F.R. § 52.63(a)(5).

36 Final Rule, Changes to the Adjudicatory Process, 69 Fed. Reg. at 2202 (citations omitted). Although the adequacy of the NRC Staff's environmental review may be within the scope of this proceeding, a petitioner is initially required to base its environmental contentions on the applicant's environmental report. *See* 10 C.F.R. § 2.309(f)(2).

37 10 C.F.R. § 2.309(f)(1)(iv).

the licensing proceeding.'"[38] In this regard, each contention must be one that, if proven, would entitle the petitioner to relief.[39] 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.[40]

5. 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.[41] 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.[42]

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

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

39 *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).

40 *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).

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

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

lacking.[43] The petitioner must explain the significance of any factual information upon which it relies.[44]

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 or an expert opinion supplies the basis for a contention."[45] 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."[46] The Board will examine documents to confirm that they support the proposed contentions.[47] A petitioner's imprecise reading of a document cannot be the basis for a litigable contention.[48] Moreover, vague references to documents do not suffice—the petitioner must identify specific portions of the documents on which it relies.[49] The mere incorporation of massive documents by reference is similarly unacceptable.[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]

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

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

45 *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 181, *aff'd on other grounds,* CLI-98-13, 48 NRC 26 (1998).

46 *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).

47 *See Vt. Yankee Nuclear Power Corp.* (Vermont 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).

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

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

50 *Id.*; *see also Tenn. Valley Auth.* (Browns Ferry Nuclear Plant, Units 1 & 2), LBP-76-10, 3 NRC 209, 216 (1976).

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

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]

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

With regard to the requirement that a petitioner "provide sufficient information to show . . . a genuine dispute . . . with the applicant . . . on a material issue of law or fact,"[54] 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.[55] If a petitioner believes the license application fails to adequately address a relevant issue, then the petitioner is to "explain why the application is deficient."[56] A contention that does not directly controvert a position taken by the applicant in the application is subject to dismissal.[57]

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.[58] Further, an allegation that some aspect of a license application is "inadequate" or

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52 *See USEC*, CLI-06-10, 63 NRC 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 10 C.F.R. § 2.309(f)(1)(vi).

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

56 Final Rule, 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.

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

58 *See Millstone*, LBP-04-15, 60 NRC at 95-96.

"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.[59]

7. Waiver of Regulations Under 10 C.F.R. § 2.335

As discussed above, 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."[60] In order 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. The requirements for a Section 2.335 petition are as follows:

> The sole ground for petition of waiver or exception is that special circumstances with respect to the subject matter of the particular proceeding are such that the application of the rule or regulation (or a provision of it) would not serve the purposes for which the rule or regulation was adopted.[61]

Further, such a petition,

> *must be accompanied by an affidavit* that identifies the specific aspect or aspects of the subject matter of the proceeding as to which the application of the rule or regulation (or provision of it) would not serve the purposes for which the rule or regulation was adopted. *The affidavit must state with particularity* the special circumstances alleged to justify the waiver or exception requested.[62]

In accordance with NRC precedent, a Section 2.335 petition "can be granted only in unusual and compelling circumstances."[63] The Commission decision in the *Millstone* case states

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

[60] *See* 10 C.F.R. § 2.335(a).

[61] *Id.* § 2.335(b).

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

[63] *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 and 2), ALAB-895, 28 NRC 7, 16 (1988), *aff'd*, CLI-88-10, 28 NRC 573, 597, *recons. denied*, CLI-89-3, 29 NRC 234 (1989) (citation omitted).

the test for Section 2.335 petitions, under which the petitioner must demonstrate that it satisfies each of the following four criteria:

> (1) the rule's strict application "would not serve the purposes for which [it] was adopted"; (2) the movant has alleged "special circumstances" that were "not considered, either explicitly or by necessary implication, in the rulemaking proceeding leading to the rule sought to be waived"; (3) those circumstances are "unique" to the facility rather than "common to a large class of facilities"; and (4) a waiver of the regulation is necessary to reach a "significant safety problem."[64]

If the petitioner makes the required prima facie showing, then the Licensing Board must certify the matter to the Commission.[65] However, if the petitioner fails to satisfy any of the factors of the four-part test required for making a prima facie showing, then the matter may not be litigated, and "the presiding officer may not further consider the matter."[66]

B. BREDL's Proposed Contentions Are Inadmissible

Applying the legal standards summarized above, each of Petitioner's ten Proposed Contentions is deficient on one or more grounds. As a result, the Petition should be denied for failure to proffer an admissible contention in accordance with 10 C.F.R. § 2.309(c).

1. Proposed Contention 1 – The NRC Cannot Hold a Fair Hearing Because the Application Adopts by Reference a Design and Operational Practices That Have Not Been Certified by the NRC or Accepted by the Applicant

In Proposed Contention 1, BREDL claims that "[t]he NRC cannot hold a fair hearing at this time because the application adopts by reference a design and operational practices that have

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64 *Millstone*, CLI-05-24, 62 NRC at 559-60 (citing *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 & 2), CLI-89-20, 30 NRC 231, 235 (1989), and *Seabrook*, CLI-88-10, 28 NRC at 597).

65 *See* 10 C.F.R. § 2.335(c), (d).

66 *See id.* § 2.335(c); *see also Millstone*, CLI-05-24, 62 NRC at 560 ("The use of 'and' in this list of requirements is both intentional and significant. For a waiver request to be granted, *all four* factors must be met.") (emphasis in the original) (citations omitted).

not been certified by the NRC or accepted by the applicant."[67] Petitioner bases this conclusion on NRC's letter docketing Amendment 16 to the AP1000 DCD, which identified certain open items in the amendment request, and on Duke's purported reliance on "non-certified" design documents.[68] Given these alleged deficiencies, the Petitioner contends that Duke is unable to conduct a probabilistic risk assessment ("PRA") or an analysis of severe accident mitigation design alternatives ("SAMDAs").[69] As such, BREDL argues that this proceeding should be suspended until the AP1000 design is finalized to avoid piecemeal litigation.[70]

Although captioned as a contention, BREDL's request to suspend the proceeding may be viewed as a motion because it seeks a procedural remedy.[71] Whether viewed as a procedurally-defective motion or a Proposed Contention, however, BREDL has failed to show suspension of this proceeding is warranted. As demonstrated below, this Proposed Contention, in essence, is an objection to the longstanding requirement that a petitioner propose contentions based on the license application at the commencement of the NRC Staff review thereof, rather than after completion of the Staff review.[72] It also challenges NRC regulations that explicitly allow a COL application to reference a docketed design certification application.[73] This Proposed Contention,

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67 Petition at 8.

68 *Id.* at 9-10. The NRC completed its acceptance review and docketed Amendment 16 to the AP1000 DCD on January 18, 2008. *See* Westinghouse Elec. Co., Acceptance for Docketing of a Design Certification Rule Amendment Request for the AP1000 Design, 73 Fed. Reg. 4926 (Jan. 28, 2008). BREDL's assertion that the NRC cannot hold a hearing at this time because design and operational practices "have not been. . .*accepted by the applicant*" (Petition at 6) (emphasis added) simply makes no sense given that Duke references and relies on the AP1000 DCD and pending Amendment to the DCD. Therefore, that part of the Proposed Contention is not addressed further in this Answer.

69 *Id.* at 10-11.

70 *Id.* at 11.

71 A motion must be made no later than 10 days after the occurrence or circumstance from which the motion arises and "must be rejected" if it does not include a certification by the moving party that it has made a sincere effort to contact other parties and resolve the issues raised in the motion. 10 C.F.R. § 2.323(a), (b). BREDL did not comply with either of these requirements.

72 *See, e.g., McGuire*, CLI-03-17, 58 NRC at 429.

73 *See* 10 C.F.R. §§ 52.55(c), 52.73(a).

therefore, should be dismissed because it: (1) challenges the NRC's Rules of Practice and design certification regulations, contrary to 10 C.F.R. § 2.309(f)(1)(iii); (2) is not properly supported by expert opinion or other factual references, contrary to 10 C.F.R. § 2.309(f)(1)(v); and (3) fails to controvert relevant portions of the application, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

a. BREDL's Complaints Regarding the NRC's Clearly-Defined Rules of Practice and the Design Certification Process are Beyond the Scope of this Proceeding

First, this Proposed Contention constitutes a direct attack on the NRC's Rules of Practice as it challenges the longstanding requirement that the NRC publish a notice of hearing "as soon as practicable after the NRC has docketed the application"[74] and that contentions "be based on documents or other information available at the time the petition is to be filed."[75] The Commission has made clear that requests for additional information ("RAIs") "are a standard and ongoing part of NRC licensing reviews'" and that "NRC does not 'violate[] any clear legal duty by proceeding first to docket [an application] and thereafter to request additional information."[76] Should Duke revise its COL Application as a result of the NRC's review process, Commission regulations allow for the submission of late-filed contentions.[77] The Petitioner's dissatisfaction with these procedural rules provides no basis to admit this Proposed Contention or suspend this proceeding.[78]

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74 10 C.F.R. § 2.104(a).

75 10 C.F.R. § 2.309(f)(2).

76 *Oconee*, CLI-99-11, 49 NRC at 336 (quoting *Baltimore Gas & Elec. Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 & 2), CLI-98-25, 48 NRC 325, 349 (1998), and *Concerned Citizens of R.I. v. NRC*, 430 F. Supp. 627, 634 (D. R.I. 1977)). *See also Tenn. Valley Auth.* (Bellefonte Nuclear Power Plant, Units 3 & 4), Docket Nos. 52-014 and 52-015, at 1-2 (Mar. 28, 2008) (SECY Order), *available at* ADAMS Accession Number ML080880340.

77 *See* 10 C.F.R. § 2.309(c). Consequently, the Petitioner's intervention rights associated with the ability to challenge any alleged defects in the WLS COL Application are protected by the opportunity to propose late-filed contentions.

78 Unlike another COL proceeding wherein the NRC extended the deadline for petitions to intervene, the Hearing Notice for this COL proceeding clearly indicated the import of Revision 16 of the AP1000 DCD and provided

The Proposed Contention also constitutes an attack on the NRC's design certification amendment process. Subpart C of 10 C.F.R. Part 52 sets forth the process for obtaining a COL for a nuclear power facility and allows a COL applicant to reference a standard design certification or an application for a design certification.[79] Duke's COL Application references the AP1000 design certification rule and associated amendment application as permitted by the Commission's regulations.[80]

The standard design certification rule for the AP1000 design is found in Appendix D to 10 C.F.R. Part 52. Appendix D defines the scope of this COL proceeding by addressing AP1000 design-related issues, by establishing the requirements for a COL applicant that references the appendix, and by creating a process for making changes and departures to the certified design. Commission regulations explicitly provide a process for amending existing design certification rules.[81] Petitioner's suggestion that this proceeding may not move forward because the WLS COL Application references the AP1000 amendment is in direct contravention of these regulations and clearly challenges the basic structure of the NRC's regulatory process, contrary to 10 C.F.R. § 2.309(f)(1)(iii).

In addition, Petitioner's claim regarding improper reliance on non-certified design documents represents a direct attack on Appendix D to 10 C.F.R. Part 52 and a misunderstanding of the two-tier structure of the AP1000 DCD. Appendix D incorporates by reference the generic

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links to pertinent AP1000 documents on the NRC website. *See* Hearing Notice, 73 Fed. Reg. at 22,978, 22,980. *Compare Dominion Va. Power Co.* (Combined License Application for North Anna Unit 3), Docket No. 52-017 (May 1, 2008) (SECY order), *available at* (ADAMS Accession Number ML081220565, *with Tenn. Valley Auth.* (Bellefonte Nuclear Power Plant, Units 3 & 4), Docket Nos. 52-014 and 52-015 (Apr. 7, 2008) (SECY Order), *available at* ADAMS Accession Number ML080980595.

79 *See* 10 C.F.R. §§ 52.55(c), 52.73(a).

80 WLS COL Application, Rev. 0, Part 1, Administrative and Financial Information, at 1.0-1.

81 10 C.F.R. Part 52, App. D, § VIII; 10 C.F.R. § 52.63(a).

AP1000 DCD.[82] Currently, Appendix D incorporates by reference Revision 15 of the DCD, and Westinghouse has submitted Revision 16 of the DCD as part of its request to amend Appendix D.[83] The AP1000 DCD—like the other three certified designs, the U.S. Advanced Boiling Water Reactor, System 80+, and AP600—is separated into two major divisions of design-related information: Tier 1 and Tier 2.[84] Tier 1 information is both approved and certified by Appendix D.[85] Tier 2 information is approved as a sufficient method for meeting Tier 1 requirements.[86] But as Appendix D recognizes that there may be other acceptable ways of complying with Tier 1, Tier 2 information is approved by Appendix D but is not certified.[87] BREDL, therefore, is simply incorrect to suggest that Tier 1 and Tier 2 information are not approved.[88]

The Petitioner also misunderstands the relationship between the design certification rule and this adjudicatory proceeding. When an applicant references a standard design certification, Commission regulations limit the scope of a COL proceeding as follows: "Except as provided in 10 C.F.R. § 2.335, in making the findings required for issuance of a combined license . . . the Commission shall treat as resolved those matters resolved in connection with the issuance or

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82 10 C.F.R. Part 52, App. D, § III.A.

83 *See id.* § III.A; Westinghouse Elec. Co., Acceptance for Docketing of a Design Certification Rule Amendment Request for the AP1000 Design, 73 Fed. Reg. at 4926.

84 The Tier 1 portion of the design-related information contained in the DCD includes definitions and general provisions; design descriptions; inspections, tests, analyses, and acceptance criteria ("ITAAC"); significant site parameters; and significant interface requirements. 10 C.F.R. Part 52, App. D, § II.D. Tier 1 information is derived from Tier 2 information. *Id.* The Tier 2 portion of the design-related information contained in the DCD includes information that generally is required to be included in a final safety analysis report ("FSAR") describing the facility, its design bases, and limits on operation; generic technical specifications ("TS"); conceptual design information; supporting information on the ITAAC; COL action items; and investment protection short-term availability controls. *Id.* § II.E.

85 *Id.* § II.D.

86 *Id.* § II.E.

87 *Id.*

88 *See* Petition at 11. The complete AP1000 DCD is available on the NRC website and is divided into 172 separate files, 21 of which contain Tier 1 information. However, each of these 21 Tier 1 files provides the certified information regarding numerous "components." Therefore, BREDL's statement that "of the 172 interconnected Westinghouse design documents, totaling more than 6,500 pages, only 21 of the components appear to have been certified by the NRC," is also inaccurate. *Id.* at 10.

renewal of a design certification rule."[89] Appendix D to 10 C.F.R. Part 52 specifies what matters are considered resolved in a COL proceeding that references the AP1000 standard design certification. For example, all nuclear safety issues associated with Tier 1 and Tier 2 information and all environmental issues concerning SAMDAs are considered to be resolved.[90] Any challenges to the previously-certified AP1000 design are outside the scope of this proceeding. Therefore, information contained or referenced in the AP1000 DCD is not subject to challenge in this COL proceeding.[91]

Recognizing that COL applicants are permitted to reference design certification applications, the Commission recently issued a Policy Statement addressing how Licensing Boards should view the scope of such proceedings in light of the longstanding principle that a contention that raises a matter that is, or is about to become, the subject of a rulemaking is outside the scope of this proceeding.[92] The Commission stated:

> With respect to a design for which certification has been requested but not yet granted, the Commission intends to follow its longstanding precedent that "licensing boards should not accept in individual license proceedings contentions which are (or are about to become) the subject of general rulemaking by the Commission." In accordance with these decisions, a licensing board should treat the NRC's docketing of a design certification application as the Commission's determination that the design is the subject of a general rulemaking. We believe that *a contention that raises an issue on a design matter addressed in the design certification application should be resolved in the design certification rulemaking proceeding, and not the COL proceeding*. Accordingly, in a COL proceeding in which the application references a docketed design certification application, the licensing board should refer such a contention to the staff for consideration in the design certification rulemaking, and hold that contention in

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89 10 C.F.R. § 52.63(a)(5). *See also* 10 C.F.R. § 52.83(a).

90 10 C.F.R. Part 52, App. D, § VI.B.1, 7.

91 *See* 10 C.F.R. § 52.63(a)(5).

92 New Reactor Policy Statement, 73 Fed. Reg. at 20,972.

> abeyance, if it is otherwise admissible. Upon adoption of a final design certification rule, such a contention should be denied.[93]

In responding to public comments on a draft of the Policy Statement, the Commission explicitly stated that the discussion of design certification applications also encompassed an application for an amendment to a design certification.[94] Accordingly, the Petitioner may raise concerns relating to the AP1000 amendment, including the determination of what material is included in Tier 1 or Tier 2, by filing comments on the proposed rule when it is issued. But BREDL cannot litigate aspects of the design certification amendment in this COL proceeding because such matters are outside the scope of the proceeding.

Importantly, the Commission Policy Statement indicates that a Proposed Contention relating to the ongoing design certification amendment should only held in abeyance "if it is otherwise admissible."[95] As further explained below, Proposed Contention 1 fails to meet the admissibility requirements in 10 C.F.R. § 2.309(f)(1)(iii), (v), and (vi), and, therefore, must be rejected regardless of the status of the design certification rulemaking.

b. BREDL's Concerns Regarding Open Items Lack Specificity and Are Beyond the Scope of the Proceeding

The Petitioner generally claims that Revision 16 to the AP1000 DCD contains "serious safety inadequacies" that have not been addressed.[96] As an example, the Petitioner cites to a discussion of an "incomplete recirculation screen design" identified in the NRC letter that docketed the application to amend the design certification.[97] As explained below, however,

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93 *Id.* at 20,972 (emphasis added) (quoting *Oconee*, CLI-99-11, 49 NRC at 345, and *Douglas Point*, ALAB-218, 8 AEC at 85).

94 New Reactor Policy Statement, 73 Fed. Reg. at 20,966.

95 *Id.* at 20,972.

96 Petition at 9.

97 *Id.* (citing Letter from David B. Matthews, NRC, to W.E. Cummins, Westinghouse (Jan. 18, 2008), *available at* ADAMS Accession Number ML073600743).

Petitioner's concern lacks the necessary specificity to show the existence of a genuine dispute on a material issue of law or fact, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

The only information the Petitioner provides to support this claim is a reference to the NRC Staff letter docketing the AP1000 design certification amendment application.[98] NRC's docketing letter does not indicate that there are "serious safety inadequacies" with the AP1000. The letter merely shows that the status of the open items could impact the NRC Staff's review schedule. Further, Commission precedent prevents Petitioner from resting solely on the NRC Staff's request for additional information to show there is a genuine dispute regarding the recirculation screen design.[99]

If BREDL believed that Revision 16 of the AP1000 DCD failed to include required information, then Proposed Contention 1 should have identified "each failure and the supporting reasons for the petitioner's belief."[100] As such, Petitioner has failed to provide sufficient information to show that a genuine dispute exists regarding the recirculation screen design, contrary to 10 C.F.R. § 2.309(f)(1)(vi).[101] Furthermore, this Proposed Contention is inadmissible because it raises issues relating to Revision 16 of the AP1000 DCD that are the subject of a general rulemaking and beyond the scope of the proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii). [102]

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98 *See id.*

99 *See Oconee*, CLI-99-11, 49 NRC at 336-37.

100 10 C.F.R. § 2.309(f)(1)(vi).

101 In addition to ignoring information contained in the AP1000 DCD, the Petitioner ignores the additional details on the recirculation screen design that Westinghouse has been providing to the NRC Staff. *See* Letter from Robert Sisk, Westinghouse, to NRC (May 20, 2008), *available at* ADAMS Accession Number ML081430068. Although the NRC Staff may request additional information, it has begun to review these submittals. *See* Letter from Thomas Bergman, NRC Office of New Reactors, to Robert Sisk, Westinghouse (June 27, 2008), *available at* ADAMS Accession Number ML081490403.

102 *See* New Reactor Policy Statement, 73 Fed. Reg. at 20,972.

c. BREDL's Allegations That Duke Cannot Properly Perform the PRA and SAMDAs Analysis for the AP1000 Design Lack Specificity, Are Unsupported, and Beyond the Scope of This Proceeding

BREDL's vague allegations that Duke cannot prepare a proper PRA or perform a SAMDAs analysis, due to alleged deficiencies in the AP1000 design, do not raise a genuine dispute on a material issue.[103] Apart from the vague, generic nature of BREDL's complaint, Petitioner completely ignores, much less controverts, applicable sections of the WLS Application (*i.e.*, Section 19.59 of the FSAR (PRA Result and Insights), Section 7.3 of the Environmental Report ("ER") (Severe Accident Mitigation Alternatives), Chapter 19 (Probabilistic Risk Assessment), and Appendix 1B (Severe Accident Mitigation Alternatives) of Tier 2 of the AP1000 DCD). BREDL simply fails to dispute any information in these sections of the application or explain why they fail to pass legal muster. Petitioner also fails to provide any basis or support for its assertion that Amendment 16 somehow invalidates the existing PRA and SAMDAs analysis.[104] Accordingly, this Proposed Contention is not properly supported and fails to demonstrate a genuine dispute of material fact for purposes of satisfying 10 C.F.R. § 2.309(f)(1)(v) and (vi). Moreover, to the extent this Proposed Contention raises issues relevant to the ongoing design certification amendment, it is also outside the scope of the proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii).

For the foregoing reasons, this Proposed Contention impermissibly challenges the NRC Rules of Practice and design certification regulations; fails to provide sufficient information showing a dispute regarding the recirculation screen design; and does not provide sufficient information, including references to specific sources and documents, that it would rely on to

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[103] Petition at 11.

[104] BREDL fails to include references or a single expert opinion in support of its claim that the PRA and SAMDA analysis are incorrect or cannot be performed. *See Fansteel,* CLI-03-13, 58 NRC at 203.

support the claim that the PRA and SAMDAs evaluation is incorrect or cannot be completed at this time. Therefore, the Board should reject this Proposed Contention in its entirety.[105]

2. Proposed Contention 2 – The Applicant Fails to Analyze the "Carbon-Footprint" of the Construction and Operation of the William States Lee Nuclear Reactors 1 & 2 in its Environmental Report

BREDL alleges in Proposed Contention 2 that Duke has failed to include a discussion of greenhouse gas emissions or "carbon-footprint" in the WLS ER.[106] In this regard, BREDL claims that Duke should have included in the ER a discussion of greenhouse gases released in the process of the production of raw materials and components, the transportation of these materials and components to the WLS site, and the processes required to build and operate the WLS nuclear power station.[107] BREDL also alleges that Duke should have included a discussion of greenhouse gas emissions associated with each step in the uranium fuel chain.[108] Finally, BREDL alleges that its members are somehow at risk from this lack of analysis as the justification for federal subsidies for new nuclear plant construction is its "putative contribution" to reversing climate change, and the failure to avert a climate crisis may have severe consequences to society and BREDL's members.[109]

As demonstrated below, this contention should be dismissed because: (1) it is not within the scope of this proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii); (2) it fails to raise an issue

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105 If this Proposed Contention were inadmissible only because it raised issues that are the subject of the ongoing AP1000 design certification amendment rulemaking, then the Board should hold the Proposed Contention in abeyance, subject to denial upon completion of the design certification rulemaking. *See* New Reactor Policy Statement, 73 Fed. Reg. at 20,972. However, a contention must be rejected if it does not satisfy any one of the six admissibility criteria. *See* Final Rule, Changes to Adjudicatory Process, 69 Fed. Reg. at 2221. As demonstrated above, the Proposed Contention is not "otherwise admissible" for numerous reasons and should be denied.

106 Petition at 12.

107 *Id*

108 *Id.*

109 *Id.* at 13.

material to the findings the NRC must make to support issuance of the COL, contrary to 10 C.F.R. § 2.309(f)(1)(iv); (3) it lacks adequate support, contrary to 10 C.F.R. § 2.309(f)(1)(v); and (4) it fails to show a genuine dispute exists on a material issue of law or fact, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

a. Proposed Contention 2 Raises Issues Beyond the Scope of This Proceeding

BREDL has not identified any legal basis for its assertion that Duke must include a "carbon-footprint" analysis in the WLS ER. The National Environmental Policy Act ("NEPA") requires that the NRC disclose the environmental impacts of a proposed action.[110] The NRC implements NEPA through the regulations found in 10 C.F.R. Part 51. The NRC's Environmental Standard Review Plan ("ESRP") provides guidance to the NRC Staff in implementing the provisions of 10 C.F.R. Part 51.[111] BREDL points to no provision in NEPA, 10 C.F.R. Part 51, or the ESRP that calls for an evaluation of the "carbon-footprint" of a proposed licensing action.

The ESRP does state that an ER should include a discussion of gaseous emissions (*see*, *e.g.*, Section 5.8.1). In doing so, however, the ESRP calls for an assessment of the *direct* physical impacts of construction-related activities and plant operation on the community.[112] Such an assessment considers odors, vehicle exhaust, dust, and other non-radiological emissions *within the context of applicable air quality standards for gaseous pollutants* (based on consultation with Federal, State, regional, and local agencies).[113] The ER contains this

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110 42 U.S.C. § 4332(2)(C)(i).

111 *See* Standard Review Plans for Environmental Reviews for Nuclear Power Plants, NUREG-1555 (Oct. 1999).

112 *See id.* at 5.8.1-3.

113 For example, the ESRP cites 29 C.F.R. § 1910, "Occupational and Health Standards" (with respect to noise, dust, and air pollution), 40 C.F.R. §§ 50-90 (as related to National Primary and Secondary Air Quality

information. For example, Table 3.6-2 in Section 3.6.3.1 (Gaseous Effluents) lists the annual emissions from the diesel generators and the diesel driven fire pumps for the two WLS units while Table 3.6-3 lists the annual hydrocarbon emissions from the associated diesel fuel oil storage tanks for the WLS units.[114] As the ER contains the information called for by the ESRP, Duke complied with the NEPA requirements as promulgated by the NRC. Because Proposed Contention 2 asserts the need for an analysis that is not required by law, it raises issues that are beyond the scope of this proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii).[115] On this fact alone, it should be dismissed by the Board.

Looking beyond this fatal flaw, Proposed Contention 2 raises additional issues that are beyond the scope of this proceeding by alleging that the ER is deficient because it does not analyze greenhouse gas emissions associated with the "uranium fuel chain."[116] The ER does in fact address this issue however. ER Section 5.7, "Uranium Fuel Cycle Impacts," references Table S-3 found in 10 C.F.R. § 51.51. Table S-3 was developed to address, on a generic basis, the need to consider the environmental effects of the uranium fuel cycle. Table S-3 summarizes and codifies the NRC's assessment and determinations for evaluating the environmental effects of the uranium fuel cycle, including gaseous emissions and electricity consumed in the fuel cycle. Again, BREDL fails to acknowledge the content of ER Section 5.7 or the existence of Table S-3.

Consequently, BREDL's claim that the Application does not address the carbon-footprint of the uranium fuel cycle is an impermissible collateral attack on Table S-3, which was

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Standards), and the Clean Air Act of 1970, as amended (as related to air quality during plant operations). ESRP at 5.8.1-3.

114 WLS COL Application, Rev. 0, Part 3, ER, at 3.6-11 to 3.6-12.

115 *See Turkey Point*, LBP-01-6, 53 NRC at 159.

116 Petition at 12-13.

developed and promulgated by NRC through the rulemaking process. 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."[117]

In addition, BREDL's claim that Duke or the NRC must justify some unspecified "federal subsidy" for construction of new nuclear reactors appears to be a direct attack on the production tax credit or the U.S. Department of Energy's loan guarantee program, both authorized by the Energy Policy Act of 2005.[118] Contentions that attack statutory provisions are beyond the scope of this proceeding.[119]

b. Proposed Contention 2 Raises Issues That Are Not Material to the NRC's Findings in This Proceeding

Further underscoring the inadmissibility of Proposed Contention 2, BREDL fails to explain how the carbon or greenhouse gas "footprint" analysis it seeks is material to the licensing determinations to be made by the NRC in this proceeding, including the agency's findings under NEPA. Proposed Contention 2 simply reflects Petitioner's inadmissible personal views on broad national (indeed, global) energy and environmental policy issues concerning climate change and the use of nuclear power as a means of producing electricity. For example, BREDL states that "emissions from many sources, in aggregate, are contributing to the destabilization of climate on planet Earth."[120]

BREDL further asserts that "[i]t is important that all public investment in climate crisis solutions rest on scientifically solid ground."[121] In this regard, Petitioner laments the alleged

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117 *See* 10 C.F.R. § 2.335(a).

118 *See* 26 U.S.C. § 45J (authorizing an advance nuclear power facility production tax credit); 42 U.S.C. § 16513(b)(4) (indicating that advanced nuclear energy facilities are eligible for federal loan guarantees).

119 *See Shearon Harris*, LBP-07-11, 65 NRC at 57-58.

120 Petition at 12.

121 *Id.* at 14.

"lack of analysis" for Congress's decision to provide federal incentives for the construction of new nuclear power plants, in part due to such plants' "putative contribution to reversing climate change."[122] Again, these are pronouncements of public policy and political opinion, not the required bases for admission of Proposed Contention 2.

BREDL fails to explain how such far-reaching governmental policy and socio-economic issues are germane to the discrete licensing determinations to be made by the NRC here. Those determinations stem from the Commission's "statutory responsibility to assure that all licensees meet *applicable safety and environmental regulations*."[123] As the Commission has previously noted, "[t]he NRC is not in the business of crafting broad energy [or environmental] policy involving other agencies and non-licensee entities [such as Congress]."[124] "Nor does the initiative to build a nuclear facility or undertake [] uranium mining belong to the NRC."[125]

Clearly, BREDL's public policy complaints are well beyond the purview of the NRC's statutory responsibility, both as a general matter and in this specific proceeding. BREDL supplies no legal or regulatory basis to conclude otherwise. The mere fact that BREDL "simply alleges that some matter ought to be considered [in this proceeding] does not provide the basis for an admissible contention."[126]

c. Proposed Contention 2 Lacks Adequate Factual, Documentary, or Expert Opinion Support

Proposed Contention 2 also is inadmissible because it lacks adequate factual or legal support, contrary to 10 C.F.R. § 2.309(f)(1)(v). The only *ostensible* factual support furnished by

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122 *Id.* at 13.

123 *Hydro Res., Inc*. (P.O. Box 15910. Rio Rancho, N.M. 87174), CLI-01-4, 53 NRC 31, 56 (2001) (emphasis added).

124 *Id.* at 55.

125 *Id.*

126 *See, e.g., Sacramento Mun. Util Dist.* (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 246 (1993).

BREDL for its Proposed Contention is a reference to an online report entitled "Nuclear Power – Energy Balance."[127] BREDL casts the report as "[a] recommended resource for conducting [a carbon-footprint] analysis,"[128] but does not explain how such an analysis (*assuming* one were even required) might be conducted here.[129]

In this regard, BREDL fails to cite to any specific portion of the multi-section reference in support of its Proposed Contention. BREDL's statement that "a flat-line projection for Greenhouse Gas emission from the nuclear fuel cycle is not likely to be an accurate representation" is inscrutable at best.[130] Finally, BREDL supplies no expert opinion to clarify the contours of its amorphous "carbon-footprint" analysis. A petitioner bears the burden to present the factual information or expert opinion necessary to support its contention adequately.[131] BREDL has not met its burden here.

d. Proposed Contention 2 Fails to Raise a Genuine Dispute on a Material Issue of Law or Fact

Lastly, Proposed Contention 2 fails to directly controvert a position taken by Duke in the Application, as required by 10 C.F.R. § 2.309(f)(1)(vi).[132] For the reasons discussed above, the broad climate and fuel-cycle-related policy concerns presented in Proposed Contention 2 are not cognizable in this proceeding. Nonetheless, to the extent BREDL arguably questions the adequacy of the ER's discussion of air quality impacts, Proposed Contention 2 fails to identify which specific portions of the ER it disputes and the supporting reasons for each dispute.

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127 Petition at 13.

128 *Id.*

129 Also, apart from the website address, BREDL provides no information as to why the cited reference is a recognized or legitimate source of information on this subject.

130 *Id.*

131 *See* 10 C.F.R. § 2.309(f)(1)(v); *Yankee Atomic*, CLI-96-7, 43 NRC at 262.

132 *See Comanche Peak*, LBP-92-37, 36 NRC at 384.

For example, ER Section 4.4.1.6 discusses air quality impacts associated with plant construction; ER Table 4.6-1 discusses measures and controls for air emissions during construction; ER Section 5.5 discusses the regulation of air emissions during plant operation; ER Section 5.7.4 discusses air emissions associated with the uranium fuel cycle; ER Table 5.7-2 (based on Table S-3 in 10 C.F.R. Part 51) provides emissions from the uranium fuel cycle; and ER Section 5.8.1.6 discusses air quality impacts resulting from plant operation. Additionally, ER Section 10.4.1.2.4 and ER Table 10.4-2 specifically address the avoidance of air pollutant emissions. Petitioner ignores all of this information in the Application. Accordingly, Petitioner has not met its burden under 10 C.F.R. § 2.309(f)(1)(vi) to show that a genuine dispute exists with the Applicant on a material issue of law or fact.

In summary, BREDL's allegations that the ER does not, but should, analyze the "carbon-footprint" of the proposed WLS nuclear units are insufficient to support the admission of Proposed Contention 2. BREDL's allegations are beyond the scope of this proceeding, are not material to any required licensing determinations of the NRC Staff, are factually and legally baseless, and do not establish that material facts are in dispute, thereby failing to satisfy four of the six criteria in 10 C.F.R. § 2.309(f)(1) that are required to be met for an admissible contention. Therefore, the Board should reject Proposed Contention 2.

3. Proposed Contention 3 – Duke's COLA Does Not Identify the Plans for Meeting its Water Requirements With Sufficient Detail in Order to Determine if There Will be Adequate Water During Adverse Weather Conditions Such as Droughts

BREDL alleges in Proposed Contention 3 that the "availability of cooling water is a significant constraint *to the safe shutdown* of the proposed reactors and without a clear plan on how that water will be provided, the application is incomplete."[133] In support, BREDL generally

[133] Petition at 14 (emphasis added).

asserts that annual temperatures in the Southeast region are increasing and predictably will continue to rise over a relatively short period of time.[134] It then claims that the Application fails to analyze potential impacts from elevated water temperatures in the Broad River and its watershed, as well as the associated impacts of prolonged periods of drought. BREDL further asserts that, as a result of these alleged deficiencies, the WLS Application does not satisfy the "requirement for completeness" pursuant to 10 C.F.R. § 2.101(a)(3).[135]

As demonstrated below, Proposed Contention 3 should be dismissed because: (1) the regional surface water temperature assertions are beyond the scope of the proceeding, lack adequate factual, documentary, and expert support, and fail to establish the existence of a genuine dispute on a material law or fact, contrary to 10 C.F.R. § 2.309(f)(1)(iii), (iv), (v), and (vi); (2) the adverse weather condition (*i.e.*, drought) assertions are beyond the scope of the proceeding, lack adequate factual, documentary, and expert support, and fail to establish the existence of a genuine dispute on a material law or fact, contrary to 10 C.F.R. § 2.309(f)(1)(iii), (iv), (v), and (vi); and (3) the completeness of the WLS COL Application for docketing is not an issue within the scope of the proceeding and fails to establish the existence of a genuine dispute on a material law or fact, pursuant to 10 C.F.R. § 2.309(f)(1)(iii), (iv), and (vi).

a. BREDL's Predictions of Increased Surface Water Temperatures and Related Impacts are Vague, Unsupported, and Beyond the Scope of the Proceeding

Petitioner states, without reference to any supporting documents or expert opinion, that "[a]nnual temperatures in the Southeast region are increasing and are projected to continue to do

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[134] *Id.* at 15-17. BREDL appears to mix both safety (*i.e.*, safe shutdown) and environmental concerns associated with cooling water for WLS in this Proposed Contention. To the extent BREDL's concerns are discernible, Duke addresses both aspects of Proposed Contention 3 in this Answer.

[135] *Id.* at 14.

so over a relatively short period of time."[136] BREDL offers absolutely no support for this assertion. It simply claims that the Application does not "fully analyze the . . . potential impacts of elevated water temperatures in the Broad River and its water shed."[137] BREDL goes on to list ten bases related to increased surface water temperatures, listed as (a) through (j) in the Petition: (a) cumulative thermal impacts to local and downriver ecosystems; (b) power production and the operation of the condenser cooling system; (c) technical specifications for reactor cooling; (d) impacts from water withdrawal, consumption, and evaporation; (e) impacts to other facilities both upstream and downstream; (f) impacts of pollution to aquatic ecology at the site and downstream; (g) power production and operational reliability; (h) impacts to customers; (i) impacts to regional grid stability; and (j) the potential for drought to exacerbate issues (a) through (i).[138]

The most fundamental and fatal defect in Proposed Contention 3 is that, contrary to 10 C.F.R. § 2.309(f)(1)(v), BREDL fails to provide *any* support for its basic, underlying premise, *i.e.*, that water temperatures in the Broad River have and will continue to increase. Instead, BREDL simply concludes—without support—that annual temperatures in the Southeast region are increasing and will continue to rise over a relatively-short period of time.[139] Such vague, unsupported claims of "elevated water temperatures" or "increasing temperatures" are insufficient bases for a Proposed Contention. BREDL is required to provide *some* facts or expert opinion to support its claim, as well as references to specific sources and documents.[140] A

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136 *Id.* at 15.

137 *Id.*

138 *Id.* at 15-16. As BREDL makes numerous additional speculative, unsupported claims regarding drought, Basis (j) is treated separately in the following the subsection.

139 *Id.*

140 *See* 10 C.F.R. § 2.309(f)(1)(v).

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.'"[141] Here, BREDL fails to offer any tangible information, expert opinion, or affidavits that support its claims regarding increasing water temperatures and, therefore, this Proposed Contention is completely unsupported and should be dismissed in its entirety, pursuant to 10 C.F.R. § 2.309(f)(1)(v).

In addition, the Petitioner's claims regarding increasing water temperatures fail to contain sufficient information to show the existence of a genuine dispute on a material issue of fact, contrary to 10 C.F.R. § 2.309(f)(1)(vi). Although BREDL alleges a trend of increasing Southeast regional water temperatures, its Proposed Contention fails to controvert the very portions of the Application that directly address such purported trends. In particular, Section 2.3.3.1.2 of the ER (Local Surface Water Quality) discusses current and historical water temperatures and then compares current surface water temperatures within the Broad River to temperatures observed during the 1970s. The Petitioner fails to controvert—or even reference—the conclusion in Section 2.3.3.1.2 of the ER that "[n]o appreciable differences in ambient temperatures or surface water temperatures were noted between the two studies."[142]

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.[143] This Proposed Contention does not contain any such information. Thus, it fails to demonstrate a genuine issue of material fact regarding the issue of increased water temperatures in the Broad River and must be dismissed.

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141 *Fansteel,* CLI-03-13, 58 NRC at 203.

142 WLS COL Application, Rev. 0, Part 3, ER, at 2.3-30.

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

As each of BREDL's bases (a) through (j) are premised on BREDL's entirely unsupported claim of increasing surface water temperatures, these bases also are inadequately supported and should be rejected. Aside from this overarching fatal deficiency, however, each basis is itself inadequate to support the admissibility of Proposed Contention 3. As summarized below, these bases are beyond the scope of the proceeding, lack proper factual support, and fail to establish the existence of a genuine dispute of material law or fact.

1. Thermal Impacts to Aquatic Ecosystems – Basis (a)

The Petitioner contends that Duke fails to analyze the "impact of reactor thermal discharge . . . on water that is already elevated in temperature – looking at both additive and synergistic impacts on the local and down-river ecosystem."[144] This claim, however, is impermissibly vague. BREDL completely fails to explain or specify what type of "additive and synergistic impacts" it believes should have been considered in the Application.

Nor does BREDL identify any specific ecosystem that could be adversely impacted by the thermal discharges beyond those already considered in the ER.[145] Similarly, BREDL fails to provide any support for its claim that elevated temperatures would have materially different impacts than those that are already described in the ER. The Commission's rules governing contention admissibility do not allow for such vague and unsupported claims.[146]

Again, BREDL ignores the content of the ER. Section 2.4.2 of the ER (Aquatic Ecology) discusses aquatic habitats, fishery resources, and provides details regarding aquatic species that could potentially be impacted by operation of the WLS nuclear units. Additionally, Section 5.3.2.2 (Discharge System – Aquatic Ecosystems) describes the potential for thermal discharges

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144 Petition at 15.

145 *See Turkey Point*, LBP-01-6, 53 NRC at 156-57 (rejecting a contention alleging impacts to threatened and endangered species because the proposed contention failed to identify any particular species of concern).

146 *See Catawba*, ALAB-687, 16 NRC at 468.

to impact these habitats, resources, and species, as well as means of minimizing such impacts. The ER concludes that these effects are limited and are not expected to have any effect on fish populations.[147] BREDL does not dispute any of these analyses or conclusions. A contention that does not directly controvert a position taken by the applicant in the application is subject to dismissal.[148]

In addition, BREDL provides no support for its assertion that some further unspecified analysis of aquatic impacts from the thermal discharge is required.[149] The Petitioner does not attempt to engage the ER's specific discussions concerning aquatic habitats, fishery resources, aquatic species, or thermal discharge impacts. Nor does BREDL furnish factual information or expert opinion of its own challenging any of the ER's discussion of these subjects. Accordingly, this element of Proposed Contention 3 should be rejected as impermissibly vague and unsupported, contrary to 10 C.F.R. 2.309(f)(1)(v) and (vi).[150]

2. Operation of the Condenser Cooling System – Basis (b)

BREDL claims the WLS Application fails to analyze the impact of "elevated cooling water temperatures and the loss of efficiency in power production due to loss of effective condensation of steam used to generate power."[151] As support, BREDL states that "nuclear power reactors around the world in increasing number . . . have gone to low-power production

147 WLS COL Application, Rev. 0, Part 3, ER, at 5.3-9.

148 *See Comanche Peak*, LBP-92-37, 36 NRC at 384.

149 Petition at 15.

150 *See Fansteel,* CLI-03-13, 58 NRC at 203 (quoting *GPU Nuclear*, CLI-00-6, 51 NRC at 208).

151 Petition at 15.

. . . due to loss of effective condensation of steam used to generate power."[152] Petitioner cites to TVA's Browns Ferry nuclear reactor in 2007 as an example, but offers no further information to support its claim of increasing numbers.[153]

To the extent this vague assertion is challenging the thermal performance of the AP1000's main condensers, this basis constitutes a direct attack on Section 10.4.1 of Tier 2 of the AP1000 DCD (Main Condensers), which specifies the design and performance parameters for the condensers. Accordingly, BREDL's challenge to these aspects of the AP1000 design is outside the scope of the proceeding.[154] Furthermore, the Petitioner fails to explain its basis for claiming that any of the design and performance parameters in DCD Section 10.4.1 of Tier 2 would somehow be exceeded based on purportedly elevated water temperatures. BREDL provides nothing more than a speculative, conclusory assertion that these parameters might be exceeded.

Further, the relationship between the availability of cooling water and plant operation is addressed in Section 2.4.11 of the FSAR (Low Water Considerations) and Section 5.3.1.1.3 of the ER (Operations During Low Flow Conditions). The Proposed Contention does not dispute the details of these analyses or provide any information suggesting that the consideration of its unspecified temperature increases would materially alter the conclusions in these sections. An allegation that some aspect of a license application is "inadequate" or "missing" does not give rise to a genuine dispute unless it is supported by facts and a reasoned statement of why the application is unacceptable or incomplete in some material respect.[155]

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152 *Id.*

153 *Id.*

154 *See* 10 C.F.R. § 52.63(a)(5); 10 C.F.R. Part 52, App. D, § VI.B.

155 *See Turkey Point*, LBP-90-16, 31 NRC at 521, 521 n.12 .

In addition, BREDL provides no basis, no facts, no expert opinion, and cites to no applicable NRC requirements or regulations in support of its assertion that the impact of hypothetical elevated cooling water temperatures on condenser cooling is in any way material to the findings NRC must make in this proceeding. The Petitioner also fails to provide any information supporting its vague and speculative claim that "loss of efficiency" would somehow materially impact any analysis in the WLS Application.[156] Therefore, this element of Proposed Contention 3 should be rejected as beyond the scope of this proceeding and as impermissibly vague, unsupported, and immaterial, contrary to 10 C.F.R. 2.309(f)(1)(iii), (iv), (v), and (vi).

3. Technical Specifications for Reactor Cooling – Basis (c)

BREDL contends that Duke should have provided an "evaluation of increasingly warmed water on tech specs for reactor cooling" in the WLS COL Application.[157] Beyond this one 12-word sentence, BREDL provides absolutely no further support, amplification, or clarification of this issue. BREDL cites to no particular Technical Specification ("TS") or how "increasingly warmed water" would have any material impact on any such TS. Therefore, on this fact alone, this aspect of the Proposed Contention should be rejected as inadequately supported and containing insufficient information to demonstrate the existence of genuine dispute on a material fact, contrary to 10 C.F.R. § 2.309(f)(1)(v) and (vi).

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156 *See Arizona Pub. Serv. Co.* (Palo Verde Nuclear Generating Station, Units 1 & 2), LBP-82-117A, 16 NRC 1964, 1992-94 (1982), *aff'd* ALAB-713, 17 NRC 83 (1983). In rejecting a contention challenging the adequacy of the plant's supply of condenser water, the Appeal Board noted that "although an insufficient supply of condenser cooling water might necessitate a reduction in power levels (and perhaps total reactor shutdown), it would not pose a safety threat." ALAB-713, 17 NRC at 84 n.2. From a NEPA perspective, the Licensing Board found that "there is no legal basis for refusing Palo Verde its operating licenses merely because some environmental uncertainties may exist in Palo Verde's future coolant supply." LBP-82-117A, 16 NRC at 1992.

157 Petition at 15.

As required by Section IV.A.2.c of Appendix D to 10 C.F.R. Part 52, the WLS COL Application includes plant-specific TS that are based on the generic AP1000 TS.[158] To the extent that BREDL is asserting, albeit in a vague and undefined manner, that Duke should have included a different or additional TS, Appendix D to 10 C.F.R. Part 52 requires that, in addition to complying with the contention admissibility requirements in 10 C.F.R. § 2.309, BREDL must meet heightened pleading requirements. A petitioner who believes a plant-specific TS derived from the generic AP1000 TS should be changed, must "demonstrate" that special circumstances as defined in 10 C.F.R. § 2.335 are present, or there is an issue with respect to compliance with the Commission's regulations in effect at the time the design certification was approved.[159] If a Licensing Board determines that a petitioner has met this burden, then the Board must certify the matter to the Commission for determination of the admissibility of the contention.[160] Therefore, a contention that challenges the adequacy of the WLS Technical Specifications is outside of the scope of this proceeding unless the petitioner demonstrates that special circumstances or a compliance issue are present.

Clearly, BREDL has not done so here. In fact, nothing cited by BREDL in this proposed contention goes beyond broad, generic concerns and speculation. Accordingly, the Petitioner's failure to meet the requirements set forth in 10 C.F.R. Part 52, App. D, § VIII.C.5 places this issue outside the scope of the proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii).

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158 *See* WLS Application, Rev. 0, Part 4, Technical Specifications.

159 10 C.F.R. Part 52, App. D, § VIII.C.5. In approving the generic AP1000 Technical Specifications, the NRC found that omission of a TS for cooling water system, service water system, and ultimate heat sink temperature limits was acceptable because water temperature does not impact safe operation of the facility. *See* Final Safety Evaluation Report Related to Certification of the AP1000 Standard Design, NUREG-1793, at 16-16 to 16-18 (2004).

160 *Id.*

4. Impacts from Water Withdrawal, Consumption, and Evaporation – Basis (d)

The Petitioner asserts that the WLS Application should consider the impact of elevated water temperatures on withdrawal, consumption, and evaporation.[161] However, this claim once again is impermissibly vague as BREDL fails to explain or specify what type of impact purportedly elevated water temperatures would have on withdrawal, consumption, or evaporation.

NRC regulations do not require Duke to consider environmental effects that are remote and speculative.[162] As BREDL provides no support for its assertion that some unspecified further analysis of increasing regional surface water temperatures is required, there is no evidence to remove its supposition from the "remote and speculative" category. BREDL does not even attempt to engage the ER's specific discussions of water withdrawal, consumption, and evaporation, or provide factual information or expert opinion addressing any of ER's discussion of these subjects.[163] Section 5.2.1 of the ER (Hydrologic Alterations and Plant Water Supply) describes in detail the water needs for the WLS facility and Section 5.2.2.1 of the ER (Plant Operational Activities Potentially Impacting Water Use) describes the potential impacts from operational activities. BREDL does not dispute any of the specifics in these sections of the ER. In addition, BREDL fails to provide support for the claim that purportedly higher temperatures

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161 Petition at 15.

162 *See, e.g., Palo Verde*, LBP-82-117A, 16 NRC at 2021 ("Where environmental effects are remote and speculative . . . there is no legal basis for denying an operating license . . . until all uncertainties are removed.").

163 *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 & 2, Catawba Nuclear Station, Units 1 & 2), LBP-02-4, 55 NRC 49, 84 (2002) ("Mere assertions without appropriate explanation and support do not satisfy the requirements of the contention rule.").

will result in any water withdrawal, consumption, or evaporation impacts that differ from those already discussed in the ER.[164]

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.'"[165] Accordingly, this basis for Proposed Contention 3 should be rejected as impermissibly vague and unsupported, contrary to 10 C.F.R. 2.309(f)(1)(v) and (vi).

5. Impacts to Other Facilities Upstream and Downstream – Basis (e)

BREDL claims that the impact of WLS water use on other facilities, upstream and downstream from the WLS site, should have considered the potential for elevated water temperatures.[166] Such a claim is impermissibly vague as BREDL fails to specify or explain, in any way, how the operation of the WLS reactors in conjunction with Petitioner's speculative claims of hypothetical elevated water temperatures could affect such facilities beyond those impacts already considered in the ER.

Section 2.3.2.1.1 of the ER (Surface Water Use) provides a description of upstream and downstream water users that could be impacted by WLS operations. In addition, Section 5.2.2.2.1 of the ER (Downstream Water Availability Impacts) addresses the impact of operating the WLS units on those current and future water users. A contention that does not directly challenge the application must be dismissed.[167] BREDL fails to controvert, let alone address in

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164 *Nuclear Mgmt. Co., LLC* (Monticello Nuclear Generating Plant), LBP-05-31, 62 NRC 735, 758 (2005) (finding a contention alleging impacts to a water source was inadequately supported because the proposed contention did not contain information linking the operation of the plant to any adverse impact to the water source).

165 *Fansteel,* CLI-03-13, 58 NRC at 203 (quoting *GPU Nuclear*, CLI-00-6, 51 NRC at 207).

166 Petition at 15.

167 *See Comanche Peak*, LBP-92-37, 36 NRC at 384.

any way, the details or conclusions of the description of regional water users or the analysis in the ER of potential impacts to the upstream or downstream water users.

Additionally, the Proposed Contention lacks any factual support, either references to specific documents or to expert opinion, showing that purportedly elevated water temperatures would materially alter the clearly-described anticipated impacts to upstream or downstream water users contained in the ER.[168] Thus, this basis consists only of general claims that are unsupported and inadequate, contrary to 10 C.F.R. § 2.309(f)(1)(v) and (vi).

6. Impacts of Pollution on Aquatic Ecology at the Site and Downstream – Basis (f)

The Petitioner claims that Duke should have considered the "impact of pollution in water at warmer temps on the ecology of the site and also down-stream," including food-chain implications.[169] BREDL claims that "a full analysis of the impact of reactor heat in hotter water on the other pollutants in the water from any source" is necessary because "most chemical reactions are facilitated by elevated temperatures."[170]

This claim, however, is particularly vague as BREDL fails to explain or specify what type of "pollution" or "chemical reactions" it believes should have been considered or the scientific or technical basis for its observation that "most chemical reactions are facilitated by elevated temperatures."[171] Nor does BREDL identify any specific ecology or food-chain that

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168 *See Monticello*, LBP-05-31, 62 NRC at 758.

169 Petition at 15-16.

170 *Id.*

171 *See Gulf States Utilities Co.* (River Bend Station, Units 1 & 2), LBP-83-52A, 18 NRC 265, 274 (1983) (rejecting contentions alleging impacts based on radiological emissions in combination with industrial effluents for not identifying a single, specific chemical or effluent that might interact with unspecified level or quantity of radiation to cause the alleged impact).

could be adversely impacted by WLS discharges.[172] Commission regulations do not permit the admission of such vague, unsupported contentions.[173]

Similarly, BREDL fails to provide any support for its claim that its requested "full analysis" of the impact of hypothetically warmer water in combination with other unspecified pollutants would have materially different impacts than those that are already described in the ER. Section 2.4.2 of the ER (Aquatic Ecology) discusses aquatic habitats, fishery resources, and provides details regarding aquatic species that could potentially be impacted by operation of the WLS nuclear units. Section 3.6 of the ER (Nonradioactive Waste Systems) describes chemical discharges from the WLS facility and provides detailed information regarding chemical and biocide effluents. Additionally, Section 5.3.2.2 of the ER (Discharge System – Aquatic Ecosystems) describes the potential for chemical discharges to impact these habitats, resources, species, and means of minimizing such impacts. The ER concludes that these effects are limited and are not expected to have any significant impact on aquatic organisms.[174] BREDL does not dispute—or even mention—any of these analyses or conclusions.

In addition, BREDL provides no support for its assertion that some further unspecified "full analysis" of aquatic impacts is required.[175] The Petitioner does not attempt to engage the ER's existing, specific discussions concerning aquatic habitats, fishery resources, aquatic species, or chemical discharge impacts. Nor does BREDL furnish factual information or expert opinion of its own challenging any of the ER's discussion of these subjects.[176] Accordingly, this

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172 *See Turkey Point*, LBP-01-6, 53 NRC at 156-57 (rejecting a contention alleging impacts to threatened and endangered species because the contention failed to identify any particular species of concern).

173 *See Catawba*, ALAB-687, 16 NRC at 468.

174 WLS COL Application, Rev. 0, Part 3, ER, at 5.3-9.

175 Petition at 16.

176 *Power Auth. of the State of N.Y.* (James A. FitzPatrick Nuclear Power Plant, Unit 3), CLI-00-22, 52 NRC 266, 295 (2000).

element of Proposed Contention 3 should be rejected as impermissibly vague and unsupported, contrary to 10 C.F.R. 2.309(f)(1)(v) and (vi).

7. Power Production, Operational Reliability, and Impacts to Customers and Grid Stability – Bases (g)-(i)

BREDL claims that elevated surface water temperatures will require the WLS reactors to go "off-line or put [sic] at very low power," possibly during a heatwave, and thus, the resulting impacts to overall power and reliability, customers, and regional grid stability should be evaluated.[177] With respect to overall power and reliability, BREDL claims that Duke "fails to project the impact on its customers, business and energy supply."[178] Regarding customers, the Petitioner states that "the loss of power during a heat-wave should be factored in terms of impact on customers."[179] BREDL provides no further elaboration regarding any alleged impacts to regional grid stability.

In any event, BREDL's assertion that WLS would somehow have to shutdown at certain water temperatures is unsupported and faulty because, as discussed previously, the AP1000 units do not rely on the Broad River to perform a safety function. The Petitioner also fails to explain how the issues of grid reliability, impacts to customers during a heatwave, or grid stability associated with possible planned curtailments of power from WLS due to water temperature constraints are material to findings NRC must make in this proceeding. Although the ESRP calls for a COL applicant to estimate the frequency and duration of water-supply shortages, it does not require the information sought by BREDL.[180] ER Sections 5.2.2.2.1 (Downstream Water Availability Impacts) and 5.3.1.1.3 (Operations During Low Flow Conditions) discuss the

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177 Petition at 16.

178 *Id.*

179 *Id.*

180 ESRP at 5.2.1-3.

frequency and duration of water-supply shortages and conclude that if the WLS units operated during the 81-year period of record, then operations would have been curtailed only once.

Similarly, Section 8.2.2 of Tier 2 of the AP1000 DCD requires that Duke perform a grid stability analysis, but only for the limited purpose of verifying that the reactor coolant pump ("RCP") will receive power from the grid for at least three seconds following a turbine trip, as assumed in the accident analyses. Section 8.2.2 of the FSAR (Grid Stability) describes the evaluation that Duke performed to confirm that the transmission system remains stable and supports RCP operation for at least three seconds following a turbine trip.

The Petitioner does not cite to or claim that any of the above information in the ER or FSAR are deficient in any way. In fact, the Petitioner fails to reference any relevant documentary material to support its claim that impacts to overall power reliability, grid stability, and customers should be evaluated differently. Accordingly, BREDL fails to demonstrate the existence of a genuine dispute of material fact regarding its concerns on these issue, contrary to 10 C.F.R. § 2.309(f)(1)(vi).[181]

Finally, as discussed previously, the Petitioner fails to specify how any of the condenser design and performance parameters in the AP1000 DCD would somehow be impacted by purportedly elevated water temperatures. BREDL provides nothing more than a speculative, conclusory assertion that such parameters could be exceeded. Absent a reference to documentary support or expert opinion to the contrary, these claims must be rejected in accordance with 10 C.F.R. § 2.309(f)(1)(v).

[181] *See Millstone*, LBP-04-15, 60 NRC at 96.

b. BREDL's Allegations of Adverse Weather Conditions and Associated Impacts are Similarly Vague, Unsupported, and Beyond the Scope of the Proceeding[182]

The Petitioner claims that the "potential for extended drought locally" will "exacerbate" the issues raised in the preceding bases to this Proposed Contention.[183] Petitioner cites to applicable sections of the ER addressing drought, including Sections 2.3.1.2.1.3 (Discharge Characteristics), 5.2.2.1 (Plant Operational Activities Potentially Impacting Water Use), 5.2.2.2.1 (Downstream Water Availability Impacts), and 5.3.1.1.3 (Operations During Lower Flow Conditions) and claims each section is deficient for failing to consider the potential for more severe periods of drought.[184] However, BREDL does not provide support for the central focus of these claims—namely that the ER should address "*projected trends* for . . . more prolonged periods of drought" and that there is "the *potential* for extended drought locally . . . to exacerbate" the issues related to elevated water temperatures.[185] Nor does BREDL propose a method to perform such an analysis.

Without any tangible information, expert opinion, or affidavits that support its claims regarding such potential "trends," there is not adequate support for this Proposed Contention and therefore, it should be dismissed.[186] Similarly, BREDL fails to provide support for its bald assertion that the potential for an extended drought will "exacerbate" the previously discussed impacts related to increasing surface water temperatures.[187] Accordingly, BREDL's claims

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182 BREDL captions its Proposed Contention in terms of adverse weather conditions, but discusses no weather conditions other than drought. Accordingly, drought is the only weather condition that is addressed in this Answer.

183 Petition at 16.

184 *Id.* at 16-19.

185 *Id.* at 16 (emphasis added).

186 *See Fansteel,* CLI-03-13, 58 NRC at 203 (quoting *GPU Nuclear*, CLI-00-6, 51 NRC at 207).

187 Petition at 16.

related to drought are conspicuously unsupported and should be dismissed as contrary to 10 C.F.R. § 2.309(f)(1)(v) and (vi).

1. Water Availability Impacts

BREDL points to the statement in Section 5.2.2.2.1 of the ER (Downstream Water Availability Impacts) indicating "that had a hypothetical [WLS station] operated during the 81-year period of record, operation would have been curtailed only once" and during that period "operations would have been curtailed for 42 days."[188] From there, it jumps to the conclusion that this "confirms" that "there are some very serious questions that need to be answered" and that "this is merely the 'tip of the iceberg' in terms of what the next four to eight decades are likely to hold."[189]

As an initial matter, BREDL misapprehends NRC's environmental requirements concerning plant water availability. The NRC's NEPA review is subject to a "rule of reason."[190] Thus, there is no legal basis for a contention "merely because some environmental uncertainties may exist" regarding a proposed plant's future water supply.[191] In fact, the NRC will find that there is "reasonable assurance that there would be a sufficient supply to meet the operational requirements" even if there is the possibility that a plant might be forced to shut down for lack of sufficient cooling water at some juncture.[192] BREDL ignores these requirements and essentially asserts that there can be no uncertainty at all regarding water use and water supply. This position, however, is in contravention of NEPA's "rule of reason" and thus, outside the scope of the proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii).

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188 *Id.* at 16-18.

189 *Id.*

190 *Palo Verde*, LBP-82-117A, 16 NRC at 1992.

191 *Id*.

192 *Id.*

BREDL also fails to provide any support for its claim that the analysis performed in the ER to calculate the impact that a severe drought will have on the ability of the WLS reactors to operate is somehow flawed. Instead, the Petitioner simply quotes sections of the ER and unremarkably asserts that there are "real issues" and "serious questions" and that the analysis presented in the ER is "merely the 'tip of the iceberg.'"[193] These platitudes, however, are insufficient to support BREDL's drought-related claims.[194] BREDL is required to provide some facts or expert opinion, as well as references to specific sources and documents, controverting the analysis in the ER. In this case, however, BREDL fails to offer any tangible information, expert opinion, or affidavits that support its claims regarding the impact that hypothetical future or prolonged droughts will have on operation of the proposed WLS reactors. Therefore, this basis is completely unsupported and should be dismissed as contrary to 10 C.F.R. § 2.309(f)(1)(v).

2. Reliance on 2005 Flow Data

BREDL next attempts to challenge Section 2.3.1 of the ER (Hydrology) with the vague claim that "the description of the Broad River does not explicate any of the issues raised here."[195] As support for this assertion, BREDL makes the jumbled assertion that "drought is reported, and 1998 – 2002 noted, however the year emphasized in the figure is 2005, after the on-set of abnormally wet conditions traveling with the remains of hurricanes that swept through the region that year."[196] Further, the Petitioner claims that the ER fails to include a discussion "on the intersection of drought and water temperatures."[197]

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193 Petition at 16-18.

194 *Millstone*, LBP-04-15, 60 NRC at 95.

195 Petition at 17.

196 *Id.*

197 *Id.*

Section 2.3.1 of the ESRP (Hydrology) indicates that an ER should provide information regarding "historical drought stages and discharges by month, and the 7-day once-in-10-years low flow" (*i.e.*, the 7Q10 flow) for surface-water used as a heat sink.[198] Section 2.3.1.2.1.3 of the ER (Broad River Description – Discharge Characteristics) describes how historical river flow values for the Broad River were determined and how those values were used to calculate the 7Q10 low flow values for WLS.

As noted in ER Section 2.3.1.2.1.3, Duke estimated long-term flows for the Broad River based primarily on extrapolated U.S. Geological Survey's ("USGS") streamflow gauge data from the Gaffney gauging station, due to its proximity to WLS and long record of data collection. Daily average flows were compiled for the periods 1938-1971 and 1986-1990.[199] Data from two upstream gauges were used to fill the data gaps, calculating pro-rated flows based on their drainage areas relative to the Gaffney station.[200] The resulting 81-year period of record (1926-2006) was used to determine an average annual flow of the Broad River and also to calculate the 7Q10 flow values.[201] The ER also includes Table 2.3-3, which provides all monthly flows and the required temperature data from 1998-2006 to illustrate monthly variability.[202]

BREDL appears to take issue with reference to Table 2.3-2 in ER Section 2.3.1.2.1.3, which shows separately the 2005 annual mean flows from various USGS gauging stations for purposes of "illustrat[ing] the Broad River's gaining stream characteristics."[203] In doing so, BREDL either misunderstands or mischaracterizes this section of the ER by claiming that the

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198 ESRP at 2.3.1-2, -3.

199 Application, Rev. 0, Part 3, ER, at 2.3-5.

200 *Id.*

201 *Id*.

202 *Id*.

203 *Id.* at 2.3-4.

2005 data are somehow improperly emphasized by the Applicant. As noted above, the entire 81-year period of record was used to calculate the average annual flow and 7Q10 flow values thereby minimizing the impact of any individual year. This claim also ignores the fact that Table 2.3-3 of the ER provides *all* monthly flows and temperatures from 1998-2006 to illustrate monthly variability.[204] "Mere assertions without appropriate explanation and support" are inadequate to satisfy the Commission's contention rule, and Petitioner fails to explain how including Table 2.3-2 in the ER materially impacts any Broad River flow analysis in the ER.[205] Similarly, BREDL fails to explain how some further unspecified analysis of the intersection of drought and temperature beyond the 81-years of daily flow data calculated by Duke would result in a materially different outcome in the NRC's review of the Application in this licensing proceeding.[206]

In addition, BREDL fails to provide expert opinion or other authority that support its assertion that 2005 constituted an "abnormally wet" year or that data from 2005 were somehow improperly relied upon elsewhere in the ER. BREDL also fails to provide any support for its vague claim that the ER is somehow missing information regarding the intersection of drought and water temperatures.[207] As stated previously, 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.'"[208] Accordingly, this vague, unsupported statement

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204 *Id.* at 2.3-43 to 2.3-44.

205 *McGuire*, LBP-02-4, 55 NRC at 84.

206 *See Millstone*, LBP-04-15, 60 NRC at 89 (indicating that "the subject matter of the contention must impact the grant or denial of a pending license application").

207 *See id.*

208 *Fansteel,* CLI-03-13, 58 NRC at 203 (quoting *GPU Nuclear*, CLI-00-6, 51 NRC at 207).

regarding the 2005 data does not raise any genuine dispute regarding any material fact, contrary to 10 C.F.R. § 2.309(f)(1), (iv), (v), and (vi).

3. Climate Change

The Petitioner contends that the ER neglects to mention "the potential for current and future climatological conditions to depart from the past (also known as 'climate change')."[209] However, BREDL fails to identify any basis for its assertion that climate change must be specifically discussed in the ER.

Section 2.3.1 of the ESRP (Hydrology) indicates that an ER should provide information regarding "historical drought stages and discharges by month, and the 7-day once-in-10-years low flow."[210] In accordance with that section of the ESRP, the WLS ER provides the required descriptions of the Broad River, which includes 7Q10 flows calculated based on the 81-year period of record, documentation of droughts since 1900, drought-related low-flows based on a review of the most severe droughts since 1926 (the USGS period of record), and monthly water temperatures based on data from 1996-2006.[211] BREDL does not challenge this information.

As noted previously, the NRC is not required to consider environmental effects that are remote and speculative.[212] BREDL has not provided any factual support demonstrating that the potential for long-term increases in surface water temperatures or drought in the Southeast are anything but remote and speculative.[213] Moreover, the Petitioner does not provide any support

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209 Petition at 17.

210 ESRP at 2.3.1-3.

211 *See* ER at 2.3-5, Table 2.3-3.

212 *See, e.g., Palo Verde*, LBP-82-117A, 16 NRC at 2021.

213 *See Vermont Yankee Nuclear Power Corp. v. Nat'l Res. Defense Council*, 435 U.S. 519, 551-54 (1978) (upholding the NRC's decision to not consider remote and speculative energy conservation alternatives and emphasizing the need for intervenors to present specific contentions when "requesting the agency to embark upon an exploration of unchartered territory"); *Monticello*, LBP-05-31, 62 NRC at 761 (rejecting a contention alleging that an application failed to consider climate change-related impacts because the petitioner offered no support that operation of nuclear plants had been affected by climate change).

for its assertion that possible, future, regional climate changes must be specifically considered in the ER, or even how such a prediction should be performed.[214] To the extent that BREDL is making a generic claim that NRC environmental regulations are inadequate to consider climate change, such a claim is also beyond the scope of the proceeding.[215] Accordingly, this unsupported Proposed Contention requests an analysis of climate change that is not required by law and thus, raises issues that are beyond the scope of this proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii) and (v).

Further, this vague claim regarding climate change is not sufficient to show the existence of a material issue of fact.[216] The Petitioner mentions ER Section 2.7.1 (Regional Climatology), but it is unclear which of the nine subsections (or what specific information in those subsections) the Petitioner intends to challenge.[217] Thus, this claim regarding climate change fails to raise a genuine dispute regarding any material fact, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

4. Impacts from Consumption and Withdrawal and the Need for a "Snap-Shot" of Water Flow

BREDL states that, while Section 5.2.2.1.1 of the ER (Makeup Water and Consumptive Use) indicates that "mean annual flow of the Broad river is cited for consumption of 2% of the Broad River," the ER fails to include an analysis of "the impact of higher ambient water temperature due to increased temperatures in the region on either water withdrawal or

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214 *See FitzPatrick*, CLI-00-22, 52 NRC at 295. As Chairman Klein recently explained, NRC regulations already require that the design of a facility specifically address severe weather events and other slower changes in climate. *See* Letter from D. Klein, NRC, to E. Markey, House of Representatives (May 28, 2008), *available at* ADAMS Accession Number ML081360313. Chairman Klein also explained: "Based on NRC's activities related to climate change, and the relatively slow rate of this change, NRC is confident that any regulatory action that may be necessary will be taken in a timely manner to ensure the safety of all nuclear facilities regulated by the NRC." *Id.*, Enclosure, at 2. Although Chairman Klein's comments regarding climate change were directed at the plant design, they are equally applicable to the NRC's NEPA responsibilities.

215 *See Duke*, LBP-02-4, 55 NRC at 88 (rejecting a contention raising generic climate change issues that did not specifically relate to the facilities at issue).

216 *See Fansteel,* CLI-03-13, 58 NRC at 203 (quoting *GPU Nuclear*, CLI-00-6, 51 NRC at 207).

217 *See Comanche Peak*, LBP-92-37, 36 NRC at 384.

consumption."[218] Further, BREDL asserts that "[i]t is important that projections be made in a 'snap-shot' manner focused on the outcomes of a hot spell in conjunction with a drought, rather than only aggregate (annual means, etc)."[219] BREDL contends that this "snap-shot" analysis "*may* show a significantly greater water consumption in these periods" and "*may* not support" the ER conclusion that onsite ponds are able to provide sufficient water for operation at full power for approximately four weeks during low flow conditions.[220]

Initially, it is unclear what BREDL means by a "snap-shot" analysis. BREDL provides no references or further explanation of this term. In any event, BREDL apparently objects to the use of aggregate or annual means from the Broad River in calculating water withdrawal and consumption, but provides no other indication of the type of analysis that the Petitioner apparently believes is required, other than the vernacular "snap-shot." This fundamental lack of clarity is sufficient reason to reject BREDL's assertion.[221]

Furthermore, BREDL's claim that onsite ponds *may* not be able to provide sufficient water for operation at full power for four weeks during low flow conditions does not present a material issue. As noted previously, an applicant is required only to provide "reasonable assurance" of adequate water supply.[222] There is no legal basis for raising a contention "merely because some environmental uncertainties may exist" regarding a proposed plant's future water supply.[223] Duke has established that there is reasonable assurance that there would be a sufficient water supply to meet the operational requirements of WLS, even if there is the rare

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218 Petition at 17.

219 *Id.*

220 *Id.* at 17-18 (emphasis added).

221 *See FitzPatrick*, CLI-00-22, 52 NRC at 295 ("the Commission will not accept the filing of a vague, unparticularized [contention]").

222 *See Palo Verde*, LBP-82-117A, 16 NRC at 1992.

223 *Id*.

possibility that the plant might be forced to shut down at some juncture due to low-flow conditions of the Broad River.

Nor has BREDL identified any basis for its assertion that there is something flawed in the ER's use of average annual flow of the Broad River to calculate withdrawal and consumption. As explained in the ER, during periods of normal river flow conditions, water is pumped from the Broad River into Make-Up Pond A.[224] The ER clearly indicates that during low flow conditions, WLS will align to the onsite reservoirs, allowing proportioned withdrawals from the river or onsite ponds.[225] Consequently, previously-established minimum flows will be maintained, which supports the ER's conclusion that "potential impacts from consumptive water uses are expected to be SMALL."[226] Accordingly, there is no factual basis for BREDL's speculative assertion that water consumption from the Broad River will somehow be greater than assumed in the ER during postulated simultaneous periods of a "hot spell" and a "drought."[227]

5. Impacts of Drought on Operation

BREDL claims that Section 5.3.1.1.3 of the ER (Operations During Low Flow Conditions) indicates that, based on data from the 1998-2002 drought, operation of WLS would have been curtailed for 42 days and that this would have been during summer peak power demand.[228] The Petitioner goes on to claim that this section of the ER "does not include many salient features, particularly the impact of elevated water temperatures on flow, and consumption of the reactors."[229]

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224 WLS COL Application, Rev. 0, Part 3, ER, at 5.2-3.

225 *Id.* at 5.2-8.

226 *Id.*

227 *See Fansteel,* CLI-03-13, 58 NRC at 203 (quoting *GPU Nuclear*, CLI-00-6, 51 NRC at 207).

228 Petition at 19.

229 *Id.*

This claim is impermissibly vague as BREDL fails to explain or specify what impact elevated water temperatures will have on flow or reactor water consumption.[230] Similarly, BREDL fails to provide any support for its claim that elevated water temperatures would have materially different impacts on the operation of WLS as already described in the ER Section 5.3.1.1.3. In fact, BREDL provides no support for its claim that hypothetical elevated water temperatures would affect water flow or the WLS water consumption.[231] Absent a reference to any documentary support or expert opinion to the contrary demonstrating that elevated water temperatures could materially impact the operability of the proposed WLS reactors, these claims must be rejected in accordance with 10 C.F.R. § 2.309(f)(1)(iv) and (v).

Furthermore, the Petitioner cannot demonstrate the existence of a genuine issue of material fact by simply restating information provided in the ER and asserting that further analysis is required.[232] Such conclusory statements cannot provide "sufficient" support for a contention.[233] Specifically, BREDL provides no reason why further analysis beyond what Duke has already provided is required to satisfy NEPA. Due to BREDL's obvious, repeated failure to provide sufficient information demonstrating that there is some genuine dispute regarding elevated water temperatures that would materially impact the operability of the proposed WLS reactors, these claims are also contrary to 10 C.F.R. § 2.309(f)(1)(vi).

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230 *McGuire*, LBP-02-4, 55 NRC at 84.

231 *Monticello*, LBP-05-31, 62 NRC at 749-50.

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

233 *See USEC*, CLI-06-10, 63 NRC at 472.

6. Impacts of Drought on the AP1000

Petitioner asserts, without further support, that the availability of cooling water can impact the safe shutdown of the proposed AP1000 reactors and increase the chances of a reactor accident.[234] The Petitioner further claims that there is no "clear plan on how [safety-related] water will be provided."[235] BREDL then asserts that the severe accident analysis and PRA are deficient for failing to "address the potential for increased risks associated with loss of off-site power that could result from the failure of the reactors to operate in the peak heat periods."[236] In support of its claim that the PRA is deficient, BREDL cites to an NRC report that assessed the risk of severe accidents for five operating reactors for the proposition that "[s]tation blackout is associated with 50% of the risk of a major reactor accident."[237] Once again, BREDL appears to have a fundamental misunderstanding of the NRC's requirements concerning plant safety, water use, and water availability, and the function of cooling water systems in the AP1000.

The Standard Review Plan ("SRP"), which provides guidance to the NRC Staff in performing COL safety reviews, requires an assessment of "the adequacy of the ultimate heat sink to supply cooling water for conditions requiring safety-related cooling" to address the effect of possible low water supplies on safety-related water supply.[238] In accordance with this section of the SRP, Section 2.4.11 of the WLS FSAR indicates that the passive containment cooling system ("PCS") functions as the safety-related ultimate heat sink.[239] As discussed in Section

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234 Petition at 14, 19.

235 *Id.* at 14.

236 *Id.* at 19.

237 *Id.* at 19 (citing Severe Accident Risks: An Assessment for Five U.S. Nuclear Power Plants, NUREG-1150 (1990)).

238 Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants, NUREG-0800, at 2.4.11-9 (Mar. 2007).

239 WLS COL Application, Rev. 0, Part 2, FSAR, at 2.4-54.

6.2.2 of Tier 2 of the AP1000 DCD, the PCS allows for safe shutdown *without* reliance on an external water supply or offsite power sources. As the AP1000 does not rely on external water supply for safe shutdown, BREDL is simply wrong when it asserts that the "availability of cooling water is a significant constraint to the safe shutdown of the proposed reactors."[240]

Moreover, in accordance with 10 C.F.R. § 52.63(a)(5) and Section VI of Appendix D of 10 C.F.R. Part 52, matters that come within the scope of the AP1000 design certification rule are considered resolved. Therefore, to the extent this Proposed Contention is challenging these aspects of the AP1000 design or NRC requirements for safety-related water availability, it is outside the scope of the proceeding.

Further, as required by 10 C.F.R. § 52.79(a)(46), the WLS FSAR contains a description of the plant's PRA and its results.[241] Section 19.59 of the FSAR describes the PRA results and incorporates by reference that same section from the AP1000 DCD. That section of the AP1000 DCD indicates that the "loss of offsite power core damage frequency contribution at power is insignificant (less than 1 percent)."[242] The DCD also indicates that "[t]he station blackout and loss of offsite power event is a minor contributor to AP1000 since the passive safety-related systems do not require the support of ac power."[243] The Proposed Contention impermissibly challenges these conclusions, which are outside the scope of the proceeding because matters addressed in the AP1000 DCD are to be considered resolved.[244]

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240 Petition at 14.

241 *See* WLS COL Application, Rev. 0, Part 2, FSAR, Ch. 19.

242 AP1000 DCD, Rev. 16, Tier 2, at 19.59-13.

243 *Id.* at 19.59-2.

244 *See* 10 C.F.R. § 52.63(a)(5); 10 C.F.R. Part 52, App. D, § VI.B. In addition, contrary to the requirements of 10 C.F.R. § 2.309(f)(1)(v), the Petitioner failed to explain why NUREG-1150, which addresses risk for plants that rely on active safety systems, would be applicable to a reactor that relies on both active and passive safety systems such as the AP1000.

Further, it is unclear what issue BREDL is attempting to raise with respect to the severe accident analysis or PRA. The Proposed Contention does not explain how infrequent, limited, and controlled shutdowns of the proposed WLS reactors during a postulated drought could increase the risk of an accident caused by the loss of offsite power. Logically, there is no such connection since offsite power—by definition—is supplied from sources other than WLS. This fundamental lack of clarity is sufficient reason to reject BREDL's challenge to the PRA.[245]

In addition, BREDL's claim that there is "no clear plan" on how safety-related water will be provided ignores Section 2.4.11.6 of the FSAR (Low Water Consideration – Heat Sink Dependability Requirements).[246] This section of the FSAR clearly states that the WLS reactors do not rely on the Broad River, or any external water sources, for safety-related cooling water. Petitioner's claims should be rejected as they ignore the portions of the Application that directly address safety-related water.

Accordingly, the claim that drought will adversely impact operation of the AP1000 should be dismissed as contrary to 10 C.F.R. § 2.309(f)(1)(iii), (v), and (vi).

c. BREDL's Allegation Regarding the Completeness of the WLS COL Application is Beyond the Scope of this Proceeding

BREDL claims that the Application is not complete for purposes of 10 C.F.R. § 2.101(a)(3) because Duke did not provide a "clear plan" on how cooling water will be provided.[247] That regulation provides as follows:

> If the . . . Director [of the NRC Staff's] Office of New Reactors . . . determines that a tendered application for a construction permit or operating license for a production or utilization facility, and/or any

[245] *See FitzPatrick*, CLI-00-22, 52 NRC at 295 ("the Commission will not accept the filing of a vague, unparticularized [contention]").

[246] *See* Petition at 14.

[247] Petition at 14.

> environmental report required pursuant to subpart A of part 51 of this chapter . . . are complete and acceptable for docketing, a docket number will be assigned to the application or part thereof, and the applicant will be notified of the determination.[248]

Based on the clear language of this regulation, the Commission delegated to the NRC Staff the authority to determine whether an application is complete for docketing purposes. Consistent with the regulation's plain language, the issue of whether an application is complete for docketing is not within the scope of an adjudicatory proceeding.[249] As a Licensing Board explained, "[t]he completeness of [an application] is not a matter that this Board should, or can, decide . . . [as the] decision whether to accept the [application] for docketing is made by the NRC Staff, and that decision is not subject to review by this Board."[250] Moreover, "NRC does not 'violate[] any clear legal duty by proceeding first to docket [an application] and thereafter to request additional information.'"[251] Accordingly, this basis is insufficient, contrary to 10 C.F.R. § 2.309(f)(1)(iii) and (iv).

Moreover, Duke provided the required analysis of safety-related cooling water in the WLS COL Application. Section 2.4.11.6 of the FSAR (Heat Sink Dependability Requirements) plainly states that the WLS reactors do not rely on the Broad River, or any external water sources, for safety-related cooling water. Contrary to the requirements of 10 C.F.R. § 2.309(f)(1)(vi), BREDL ignores that portion of the Application.[252]

In conclusion, for the many foregoing reasons, Proposed Contention 3 lacks support, raises immaterial issues that are not within the scope of the proceeding, and fails to demonstrate

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248 10 C.F.R. § 2.101(a)(3).

249 *See Monticello*, LBP-05-31, 62 NRC at 743 (citing *New England Power Co.* (NEP, Units 1 & 2), LBP-78-9, 7 NRC 271, 280 (1978)).

250 *Id.*

251 *Oconee*, CLI-99-11, 49 NRC at 336 (quoting *Concerned Citizens of Rhode Island v. NRC*, 430 F. Supp. 627, 634 (D. R.I. 1977)).

252 *See Millstone*, LBP-04-15, 60 NRC at 95-96.

the existence of a genuine dispute of material fact or law. Therefore, the Board should reject this Proposed Contention.

4. Proposed Contention 4 – The Applicant Has Not Demonstrated That it is Financially Qualified to Engage in Activities Authorized by the Operating License in Accordance With the Regulations of 10 CFR § 50.57(a)(4).

BREDL alleges in Proposed Contention 4 that Duke "has not demonstrated that it is . . . financially qualified to engage in the activities authorized by the *operating license* in accordance with the regulations of 10 C.F.R. § 50.57(a)(4)."[253] As the basis for this Proposed Contention, BREDL claims that it is not beneficial to build new nuclear power reactors because the current adverse economic conditions likely will decrease energy demand and because taxpayers will be responsible for loan guarantees.[254] The Petitioner provides statements attributed to an economist claiming that, if a large part of Duke's anticipated capital expenditure on future expansion is spent outside of the U.S., then Duke may fall into financial crisis.[255]

As demonstrated below, this Proposed Contention should be dismissed because: (1) it is not within the scope of this proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii); and (2) fails to raise an issue material to the findings the NRC must make to support issuance of the COL, contrary to 10 C.F.R. § 2.309(f)(1)(iv).

a. BREDL's Challenge to Duke's Financial Qualification to Operate the WLS Plant is Beyond the Scope of the Proceeding

This Proposed Contention represents an impermissible challenge to the NRC's generic determination that regulated electric utilities such as Duke are financially qualified to operate

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253 Petition at 20 (emphasis added).

254 *Id.* at 21.

255 *Id.* The Petition included no expert declaration, affidavit, or statement of qualifications. Accordingly, there is no basis for finding that the statements attributed to Xuan Chi qualify as an expert opinion for purposes of satisfying 10 C.F.R. § 2.309(f)(1)(v).

nuclear power plants. With respect to financial qualifications, NRC regulations require that a COL application contain the following information:

> *Except for an electric utility applicant for a license to operate* a utilization facility of the type described in § 50.21(b) or § 50.22, information sufficient to demonstrate to the Commission the financial qualification of the applicant to carry out, in accordance with regulations in this chapter, the activities for which the permit or license is sought.[256]

The clear terms of the above provision exempt electric utility applicants like Duke from demonstrating financial qualification with respect to the activities authorized by an operating license. Accordingly, the WLS COL Application indicates that Duke "conducts business as a regulated electric utility, and as such, pursuant to 10 CFR 50.33(f), [Duke] is exempt from an operational costs financial qualification review. Consequently, projected operating costs are not discussed in this application."[257]

As the Commission indicated in the Statement of Considerations for 10 C.F.R. § 50.33(f), "this rule amounts to a generic resolution of financial qualification issues . . . in operating license proceedings involving electric utilities."[258] Thus, as a COL is a "combined construction permit and operating license,"[259] an electric utility COL applicant such as Duke need only demonstrate financial qualifications with respect to construction and related fuel cycle costs.[260]

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256 10 C.F.R. § 50.33(f) (emphasis added). *See also* 10 C.F.R. § 52.77 (requiring that a COL application contain the information required by 10 C.F.R. § 50.33).

257 WLS COL Application, Rev. 0, Part 1, Administrative and Financial Information, at 1.0-7. "Electric utility" is defined as "any entity that generates or distributes electricity and which recovers the cost of this electricity, either directly or indirectly." 10 C.F.R. § 50.2. There is no dispute that Duke is an electric utility. *See* WLS COL Application, Rev. 0, Part 1, Administrative and Financial Information, at 1.0-1 to 1.0-2, 1.0-8.

258 Final Rule, Elimination of Review of Financial Qualifications of Electric Utilities in Operating License Review and Hearings for Nuclear Power Plants, 49 Fed. Reg. 35,747, 35,751 (Sep. 12, 1984) ("Financial Qualifications Rule"). The U.S. Court of Appeals for the D.C. Circuit upheld the validity of this rule. *See Coalition for Env't v. NRC*, 795 F.2d 168 (D.C. Cir. 1986).

259 10 C.F.R. § 52.1(a).

260 *See* COL/DC-ISG-2, Final Interim Staff Guidance on Financial Qualifications of Applicants For Combined License Applications, Enclosure, at 3 (May 2, 2008), *available at* ADAMS Accession Number ML080710301.

Contrary to the clearly-defined scope of the NRC's financial qualification review in this proceeding, this Proposed Contention challenges whether Duke is "financially qualified to engage in the activities authorized by the *operating license*."[261] A contention that challenges an NRC rule or advocates stricter requirements than agency rules impose is not within the scope of an adjudicatory proceeding because, absent a waiver, "no rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding."[262] Therefore, this Proposed Contention challenging whether Duke is financially qualified to operate a nuclear plant is not within the scope of this proceeding.[263]

b. BREDL's Concerns Regarding Duke's Profitability and Taxpayer Costs are Immaterial to the Proceeding

The Petitioner is "responsible for formulating the contention" and thus, by its own terms, this Proposed Contention is outside the scope of the proceeding.[264] Nonetheless, even if the Board were to view this Proposed Contention as challenging whether Duke is financially qualified to cover estimated construction and related fuel cycle costs, this Proposed Contention would not be admissible because it raises issues that are not material to the financial qualification review for construction.

An electric utility COL applicant must demonstrate that it "possesses or has reasonable assurance of obtaining the funds necessary to cover estimated construction costs and related fuel

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261 Petition at 20 (emphasis added). The Proposed Contention also references 10 C.F.R. § 50.57(a)(4), which addresses the findings the Commission must make before issuing an operating license and, in pertinent part, indicates "no finding of financial qualification is necessary for an electric utility applicant for an operating license." *See* Petition at 20. In framing its issue as whether "the owner-*operator* is financially sound," the Petitioner also discusses the "granting of [the] *operating license*." *Id.* (emphasis added).

262 10 C.F.R. § 2.335(a).

263 Petitioner has not requested waiver from the rule exempting Duke from the financial qualification review for its operating license. Nor has the Petitioner discussed the special circumstances that might justify such a waiver, *see, e.g., Seabrook*, ALAB-895, 28 NRC at 17, or submitted an affidavit specifying why the rule would not serve the purposes for which it was adopted, contrary to 10 C.F.R. § 2.335(b).

264 *See* Statement of Policy on Conduct of Adjudicatory Proceedings, CLI-98-12, 48 NRC at 22.

cycle costs."[265] Section 1.2 of Part 1 of the WLS COL Application satisfies these requirements by providing financial statements demonstrating that Duke and its holding company possess, or have reasonable assurance of obtaining, the funds necessary to cover construction and related fuel cycle costs. BREDL has not challenged—or again referenced—these conclusions.

In the leading case, *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 & 2), CLI-78-1, 7 NRC 1, 18 (1978), the Commission held that this "reasonable assurance" requirement "does not mean a demonstration of near certainty that an applicant will never be pressed for funds in the course of construction," but rather "that the applicant must have a reasonable financing plan in light of relevant circumstances." The Commission indicated that the purpose of this requirement is "to assure that financial conditions did not compromise the applicant's clear self-interest in safety."[266] Given the "seemingly tenuous link between safety and financial qualifications, particularly for a large regulated utility," the Commission upheld Licensing and Appeal Board decisions finding that the applicant had satisfied the requirement for financial qualifications because "[i]n the absence of any demonstrated direct connection between financial qualifications and safety in the utility industry – either generally or in this case in particular – [the Commission was] left with the essentially speculative claims of the parties."[267]

Moreover, in the Statement of Considerations for the current financial qualification rule, the Commission further explained:

> Neither in this rule nor in its financial qualification review has the Commission made any assumption as to the rate of return or the level of profit to be allowed to utilities from the operation of nuclear plants. Its concern is that reasonable and prudent costs of safely maintaining and operating nuclear plants will be allowed to

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[265] 10 C.F.R. § 50.33(f)(1). Appendix C to 10 C.F.R. Part 50 specifies the type of information needed to satisfy this requirement.

[266] *Seabrook*, CLI-78-1, 7 NRC at 18.

[267] *Id.* at 18.

> be recovered through rates. This concern does not extend to any level of profit or rate of return beyond those operating expenses. The Commission's concern is with safe operation, not profits.[268]

In contrast to the Commission's longstanding view that an applicant's financial qualification is a safety issue, this Proposed Contention essentially argues that the operation of the WLS units may not be as profitable as Duke currently estimates and will adversely impact taxpayers presumably through nonpayment of federal loan guarantees. However, the Proposed Contention does not in any way allege, much less support a claim, that Duke's profitability would impact safety. Instead, this Proposed Contention simply speculates about future events which might occur that might impact Duke's profitability and perhaps adversely impact taxpayers – layering speculation, upon guesswork, upon prophecy.[269]

As such, the Proposed Contention fails to demonstrate (or even allege) a nexus between the Applicant's financial condition and the safe construction and operation of the WLS units. Therefore, this Proposed Contention should be rejected because it is contrary to applicable legal standards governing financial qualification and fails to raise an issue that is material to the NRC's financial qualifications review, both contrary to 10 C.F.R. §§ 2.309(f)(1)(iv) and 50.36(f).

In addition, Petitioner's speculation regarding Duke's financial condition does not constitute a material dispute that could impact the outcome of the proceeding. The Petitioner supposes that "Duke's anticipation of future financial benefits *maybe* [sic] a little too optimistic" and that there *may be* profits, "although not predictably."[270] BREDL does not demonstrate how the mere possibility of divergence between Duke's profit estimates and its own musings on this

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[268] Financial Qualifications Rule, 49 Fed. Reg. at 35,749.

[269] *See* Petition at 21.

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

topic has a colorable, actual, much less material, effect on this proceeding—especially when the Petitioner utterly fails to explain and demonstrate how its different, unsupported opinion on this matter could adversely impact safety.

For the foregoing reasons, this Proposed Contention does not raise issues that are within the scope of the proceeding or that are material to the NRC's financial qualification review. Therefore, the Board should reject this Proposed Contention.

5. Proposed Contention 5 – The COLA Does not Provide Reasonable Assurance of Adequate Protection of Public Health and Safety Required by 10 CFR § 50.57(a)(3). The FSAR Insufficiently Analyzes Reactor Units' Capability to Withstand a Design-Basis and Safe Shutdown Earthquake Because They Fail to Include More Information Regarding the Type, Frequency, and Severity of Potential Earthquakes in Violation of 10 CFR Part 100, Appendix A

BREDL asserts in Proposed Contention 5 that Duke's COL Application (the FSAR in particular) does not comply with 10 C.F.R. Part 100, Appendix A, because it allegedly fails to include "more recent information regarding the type, frequency, and severity of potential earthquakes."[271] As support of its Proposed Contention, BREDL culls selected figures and accompanying narrative text from the USGS website.[272] These figures and text present information concerning historical earthquake activity and peak ground acceleration (%g with 2% probability of exceedance in 50 years) within the State of South Carolina.

Based on this information, which includes references to the Charleston earthquake of 1886 and numerous other earthquakes occurring over the past century, BREDL asserts: "South Carolina is in an active earthquake zone."[273] BREDL further infers from this information that there are "active" faults at the WLS site, and claims that the Application "*seems* to suggest no

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271 Petition at 22.

272 *Id.* at 23-27.

273 *Id.* at 22.

active faults."[274] In so doing, BREDL relies on a brief passage found not in Duke's FSAR (the portion of the Application that BREDL claims is deficient) but rather, in the ER.[275] Finally, BREDL claims that unidentified "experts" at the University of South Carolina maintain that a nuclear plant located in upstate South Carolina "should be designed to withstand another Charleston Earthquake."[276] Without any further explanation, BREDL again soft peddles, noting that the Application "*seems* to be at odds" with this conclusion.[277]

Duke opposes the admission of Proposed Contention 5. It lacks reasonable specificity and basis, contrary to 10 C.F.R. § 2.309(f)(1)(i)-(ii); lacks adequate factual or expert support, contrary to 10 C.F.R. § 2.309(f)(1)(v); and fails to establish a genuine dispute with the Applicant on a material issue of law or fact, contrary to 10 C.F.R. § 2.309(f)(1)(vi). As such, BREDL offers nothing material in support of its claim that the WLS COL Application does not adequately address the pertinent seismic siting and design criteria set forth in 10 C.F.R. Parts 100 and 50, respectively.

a. BREDL's Assertions Regarding Earthquakes and Active Faults Lack Reasonable Specificity and Basis

In seeking admission of a contention, a petitioner "must explain, with specificity, particular safety or legal reasons requiring rejection of the contested [application]."[278] Moreover, the petitioner must "provide some sort of minimal basis indicating the potential validity of the contention."[279] Proposed Contention 5 fails to meet these basic admissibility requirements.

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274 *Id.* at 27 (emphasis added).

275 *Id.* (quoting ER § 2.6.2 at 2.6-2).

276 *Id.* at 28.

277 *Id.* (emphasis added).

278 *Millstone*, CLI-01-24, 54 NRC at 359-60.

279 Rules of Practice for Domestic Licensing Proceedings—Procedural Changes in the Hearing Process, 54 Fed. Reg. at 33,170.

Although BREDL asserts that the FSAR does not sufficiently evaluate the capability of the proposed plant to withstand a design-basis and safe shutdown earthquake, it fails to cite a single page or section of the FSAR in its arguments. As such, it is entirely unclear which specific portion(s) of the FSAR BREDL believes to be deficient. Moreover, BREDL makes only a general reference to 10 C.F.R. Part 100, Appendix A. It does not identify any specific siting criteria within Part 100 or design criteria within Part 50 that it believes the Application does not meet.[280] The contention specificity requirement clearly demands more than what BREDL has provided here.

Proposed Contention 5 also lacks a sufficient foundation to "warrant further exploration" by this Board.[281] As noted above, BREDL gingerly opines that the COL Application "seems" to suggest the lack of any "active faults" at the proposed site, and "seems" to suggest that the plant will not be designed to withstand potential earthquake ground motions (*i.e.*, the "Safe Shutdown Earthquake" or "another Charleston earthquake"). "Mere assertions without appropriate explanation and support do not satisfy the requirements of the contention rule,"[282] although BREDL's soft-peddling use of the term "seems" undercuts any real assertion or belief. As such,

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[280] The "Geologic and Seismic Siting Criteria" set forth in 10 C.F.R. § 100.23 state:

> [T]he principal geologic and seismic considerations that guide the Commission in its evaluation of the suitability of a proposed site and adequacy of the design bases established in consideration of the geologic and seismic characteristics of the proposed site, such that there is a reasonable assurance that a nuclear power plant can be constructed and operated at the proposed site without undue risk to the health and safety of the public.

The specific substantive requirements contained in 10 C.F.R. § 100.23(c) and (d) apply to an applicant for a COL issued under 10 C.F.R Part 52. *See* 10 C.F.R. § 52.79(a)(1)(vi). The seismic and geologic siting criteria in Appendix A to Part 100 (cited by BREDL) apply to an operating license applicant or holder whose construction permit was issued prior to January 10, 1997, and, therefore, are not applicable to the WLS COL Application.

[281] *Seabrook*, ALAB-942, 32 NRC at 428.

[282] *McGuire*, LBP-02-4, 55 NRC at 84.

BREDL's claims are not sufficiently specific, and devoid of supporting explanation or support, to warrant an adjudicatory hearing.

b. BREDL's Proposed Contention 5 Lacks Adequate Factual, Documentary, or Expert Opinion Support

Proposed Contention 5 also fails to comply with 10 C.F.R. § 2.309(f)(1)(v), which requires "a petitioner to present the factual information and expert opinions necessary to adequately support its contention."[283] BREDL provides no credible support for the vague assertion that the FSAR "insufficiently analyzes" the capability of the proposed new units to withstand a design-basis or Safe Shutdown Earthquake.[284] Nor does it attempt to engage the specifics of the extensive geological, seismological, and geotechnical data and analyses presented in Section 2.5 of the FSAR. Exceeding 200 pages in length and containing numerous supporting tables and figures, FSAR Section 2.5 was prepared by a team of geologists and engineers with substantial expertise in seismic-hazard analysis and engineering geology.[285] BREDL furnishes no expert opinion of its own to counter any of the data or analyses in FSAR Section 2.5, notwithstanding the technical complexity of the issues addressed in that section of the Application.

Insofar as BREDL furnishes any factual information in Proposed Contention 5, it fails to explain the potential safety significance of that information, particularly as it relates to the

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283 *Monticello*, LBP-05-31, 62 NRC at 749-50 ("A petitioner's contention will be inadmissible if the petitioner has offered no tangible information, no experts, no substantive affidavits, but instead only bare assertions and speculation.") (citations omitted).

284 Petition at 22.

285 This includes expertise in deterministic and probabilistic ground motion analyses; evaluation of fault activity and the potential for surface rupture at a site or in a region; assessments of maximum credible earthquake and maximum probable earthquake magnitudes; evaluation of earthquake recurrence and fault slip rates; identification and characterization of potential seismic sources; characterization of regional seismotectonic settings; and development and evaluation of tectonic models.

required seismic data and analyses presented in the FSAR.[286] The small patchwork of tables and text that BREDL has extracted from the USGS website support no more than the unremarkable and dated observation that "South Carolina is in an active earthquake zone."[287] BREDL does not explain how this information demonstrates a putative technical or legal deficiency in the FSAR. If BREDL is suggesting that this information constitutes the "more recent information" allegedly missing from the FSAR, then it could not be further off the mark. As discussed below, FSAR Section 2.5 contains extensive discussion of regional seismotectonics and the seismic hazard for the WLS site, including the historical seismicity and seismic hazard associated with the Charleston seismic source.

Similarly, BREDL does not explain *why* it believes the FSAR fails to address so-called "active" faults.[288] Nor does it explain *why* it believes the FSAR "seems" not to address the seismic-design considerations associated with "another Charleston earthquake."[289] In this regard, BREDL's reliance on the unexplained views of unidentified "experts" at the University of South Carolina is patently insufficient to support its Proposed Contention.[290]

c. BREDL's Proposed Contention 5 Fails to Establish a Genuine Dispute on a Material Issue of Law or Fact

In view of the above, Proposed Contention 5 clearly fails to meet the final admissibility criterion set forth in 10 C.F.R. § 2.309(f)(1)(vi). With respect to an alleged error or deficiency in an application, that criterion requires a petitioner to cite *specific portions* of the application that

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286 *Monticello*, LBP-05-31, 62 NRC at 750 ("[P]roviding any material or document as a basis for a contention, *without setting forth an explanation of its significance*, is inadequate to support the admission of the contention.") (citing *Fansteel*, CLI-03-13, 58 NRC at 205) (emphasis added).

287 Petition at 22.

288 *Id.*

289 *Id.* at 28.

290 *See USEC*, CLI-06-10, 63 NRC at 472 (citation omitted) (affirming licensing board holding that quotations from correspondence with a purported expert, with no explanation or analysis of how the expert's statements relate to an error or omission in the application, are insufficient to support a contention).

the petitioner disputes and to provide *supporting reasons for each dispute.*[291] In the case of an alleged failure to include relevant information as required by law, a petitioner must identify "*each failure* and the *supporting reasons for the petitioner's belief.*"[292] As noted above, BREDL fails to include any specific references to the FSAR or any supporting reasons for its belief that the FSAR is somehow deficient.[293] Accordingly, on its face, the Proposed Contention fails to directly controvert the Application, as required by NRC rules and precedent.[294]

Indeed, it is clear that Proposed Contention 5 is a "textbook" example of an inadmissible contention in which "the Petitioner's assertion that the application[] [is] deficient is simply based upon a failure to read or perform any meaningful analysis of the application[]."[295] The limited information presented by BREDL relates generally to three areas: (1) seismicity associated with the Charleston seismic source; (2) the potential presence of capable tectonic sources at or near the WLS site; and (3) the seismic design margin of the proposed new WLS AP1000 units. As summarized below, the Application thoroughly and adequately addresses each of these issues.

1. Seismicity Associated with the Charleston Seismic Zone

BREDL states, without reasonable specificity and basis, that the FSAR fails to include "more recent information regarding the type, frequency, and severity of recent earthquakes."[296] To the contrary, the FSAR includes a comprehensive compilation of current geological,

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[291] 10 C.F.R. §2.309(f)(1)(vi); *see also Fansteel*, CLI-03-13, 58 NRC at 205 (noting that to meet its pleading burden, a petitioner must provide "plausible and adequately supported claims that the data [in the application] are either inaccurate or insufficient, *i.e.*, by specifically identifying each failure and explaining why the data are flawed).

[292] 10 C.F.R. § 2.309(f)(1)(vi).

[293] *See Turkey Point*, LBP-90-16, 31 NRC at 521, 521 n.12 (stating that 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).

[294] *See Comanche Peak*, LBP-92-37, 36 NRC at 384.

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

[296] Petition at 22.

geophysical, and seismological data, as well as evaluations of the current scientific knowledge concerning earthquake sources, maximum earthquakes, and earthquake rates.[297] The FSAR also assesses the uncertainty in characterizing the frequency and maximum magnitude of potential future earthquakes associated with these sources and the ground motion that they may produce.[298]

BREDL simply ignores these analyses. In particular, the FSAR includes recent information regarding type, frequency, and magnitude for the WLS site earthquake hazard, including the Charleston seismic source. As reflected in FSAR Section 2.5.2.1.2 and FSAR Table 2.5.2-201, the WLS site seismic source model includes cataloged earthquakes from 1627 through August 2006 for Mb≥3.0 located within a 200-mile radius from the site. In updating the EPRI catalog, Duke considered a rectangular region that encompasses the 200-mile radius site region and includes seismic sources contributing significantly to WLS site earthquake hazard—including the Charleston seismic source. FSAR Section 2.5.1.1.3.2.1 discusses Charleston tectonic features, including the 1886 earthquake cited by BREDL. FSAR Sections 2.5.2.2.2.4 and 2.5.2.4.3.1 discuss the use of the most current characterization of the Charleston seismic source. Indeed, the FSAR indicates that the ground motion hazard at the WLS site is dominated by the Charleston seismic source.

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297 *See* WLS COL Application, Rev. 0, Part 2, FSAR § 2.5.1 (regional geologic and seismic information), § 2.5.2 (site vibratory ground motion, including updated seismicity catalog, seismic sources, and site-specific response spectra), 2.5.3 (surface faulting in site area); § 2.5.4, (stability of subsurface materials and foundations), and § 2.5.5 (slope stability).

298 *See id.* § 2.5.2 at 2.5-81 to 2.5-82; *see also id.* §§ 2.5.2.6, 2.5.2.7.

2. Analysis of Capable Tectonic Sources At or Near the WLS Site

As noted above, BREDL, though referring to the ER, alleges that the FSAR "seems" to wrongly indicate that there are no "active" faults at or near the WLS site.[299] Applicable NRC regulatory guidance (Regulatory Guide 1.208) does not recognize BREDL's "commonly considered" definition of an "active" fault. Instead, it directs applicants to assess potential "capable tectonic sources."[300]

Specifically, RG 1.208 defines a "capable tectonic source" as "a tectonic structure that can generate both vibratory ground motion and tectonic surface deformation such as faulting or folding at or near the earth's surface in the present seismotectonic regime."[301] One of the potential-defining attributes of a capable tectonic source is the presence of surface or near-surface deformation of landforms or geologic deposits of a recurring nature within the last approximately 500,000 years or at least once in the last approximately 50,000 years.[302] The RG 1.208 definition of capable tectonic source thus exceeds or bounds the definition of an "active" fault cited by BREDL (*i.e.*, movement of a fault one or more times in the last 10,000 years).

FSAR Section 2.5.3 evaluates the potential for tectonic surface deformation and non-tectonic surface deformation at the WLS site. That evaluation, developed in accordance with RG 1.208, complies with 10 C.F.R. § 100.23. It concludes that there are no capable tectonic sources within the WLS site vicinity (25-mile radius), and that there is negligible potential for tectonic

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299 Petition at 27.

300 *See* Regulatory Guide ("RG") 1.208, "A Performance-Based Approach to Define the Site-Specific Earthquake Ground Motion" (Mar. 2007).

301 RG 1.208, Appendix A at A-1.

302 *Id.*

fault rupture at the site and within the site vicinity.[303] It further concludes that there is negligible potential for non-tectonic surface deformation at the site and within the site area (5-mile radius). BREDL similarly ignores this information and makes no effort to controvert it.

3. Seismic Design Margin

NRC regulations require that a COL applicant determine a Safe Shutdown Earthquake (or SSE) Ground Motion for a given site, and that the applicant estimate the uncertainty inherent in its estimates of the controlling earthquake ground motions through a probabilistic seismic hazard analysis ("PSHA").[304] The SSE is defined as the vibratory ground motion for which certain structures, systems, and components are designed, pursuant to Appendix S to 10 C.F.R. Part 50, to remain functional.[305] The SSE for a site is characterized by both horizontal and vertical free-field ground motion response spectra at the free ground surface. FSAR Section 2.5.2, which was prepared in accordance with RG 1.208 guidance to comply with 10 C.F.R. § 100.23, discusses vibratory ground motion assessments, including the development of the site-specific SSE ground motion.

By asserting that the FSAR "insufficiently analyzes" the ability of the proposed WLS units to withstand earthquake ground motions, BREDL yet again ignores the pertinent analyses contained in the FSAR. In particular, FSAR Section 2.5.2.7.4 (including the various figures cited therein) presents the site-specific design basis response spectra. FSAR Section 3.7.1.1.1 compares the site-specific ground motions from Section 2.5.2.7.4 to the AP1000 design ground

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303 As noted above, BREDL appears to equate the occurrence of historical earthquakes (particularly the 1886 earthquake) in the Charleston area with the presence of "active" faults in the general location of the site. As discussed in FSAR Section 2.5.1.1.3.2.1, the source of the 1886 earthquake is not definitively attributed to any particular fault shown in Figure 2.5.1-215, "Regional Charleston Tectonic Features." Rather, the source of the 1886 Charleston earthquake is inferred based on the geology, geomorphology, and instrumental seismicity of the region.

304 10 C.F.R. § 100.23(d)(1).

305 *See* 10 C.F.R. § 100.3.

motions. It shows that the calculated WLS site-specific horizontal and vertical response spectra are within the seismic design margin of the AP1000.

In summary, in Proposed Contention 5, BREDL has failed to directly controvert Duke's COL Application with reasonable specificity or explain how the limited generic information it presents relates to specific parts of the Application, and thereby has failed to show any genuine dispute of material fact or law with the Applicant. Accordingly, Proposed Contention 5 should be rejected because it fails to meet the contention admissibility criteria set forth in 10 C.F.R. § 2.309(f)(1)(i), (ii), (v), and (vi).

6. Proposed Contention 6 – Whether William States Lee III Will Improve the General Welfare, Increase the Standard of Living, or Strengthen Free Competition in Private Enterprise

BREDL alleges in Proposed Contention 6 that NRC has failed to enforce existing regulations required to implement the fundamental purpose of the Atomic Energy Act.[306] BREDL further alleges that granting Duke's COL would not improve the general welfare, increase the standard of living or strengthen free competition in private enterprise.[307] In support of this Proposed Contention, BREDL vaguely identifies generic concerns with (1) NRC's ability to identify hardware failures in operating and new reactors;[308] (2) human factors engineering for the AP1000 design;[309] (3) the independence of NRC's review;[310] and (4) NRC "procedural shell games."[311]

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306 Petition at 28.

307 *Id.*

308 *Id.* at 29-31.

309 *Id.* at 31-32.

310 *Id.* at 32-33.

311 *Id.* at 33-35.

Duke addresses the general contention first, followed by a discussion of each of the four bases raised by BREDL.

a. Proposed Contention 6 is Inadmissible Because it Raises Generic Concerns About General Welfare, Standard of Living, and Free Competition That Are Beyond the Scope of the Proceeding and Immaterial to the Findings NRC Must Make Prior to Issuance of the WLS COL

Petitioner alleges that granting the COL for WLS would not improve the general welfare, increase the standard of living, or strengthen free competition as required by the Atomic Energy Act ("AEA"), 42 U.S.C. § 2011.[312] However, the referenced section of the AEA merely provides the general policy for use of nuclear power in the United States. It does not define or address the standards for issuance of a license for a nuclear power reactor. Instead, Section 103 of the AEA, 42 U.S.C. § 2133, provides the overarching standards for issuance of a license, and those standards are focused on safety and security and do not require applicants to improve the general welfare, increase the standard of living, or strengthen free competition.

Similarly, NRC regulations implementing the AEA do not require that an applicant address and/or demonstrate whether the issuance of a COL will improve the general welfare, increase the standard of living, or strengthen free competition in private enterprise.[313] Nor is the NRC required to make such a finding prior to granting a COL.[314] Accordingly, these matters are outside the scope of this proceeding and are not material to the findings that the NRC must make to support issuance of the COL as required by 10 C.F.R. § 2.309(f)(1)(iii) and (iv).

Additionally, BREDL does not even refer to, much less identify, a genuine dispute of material fact regarding the WLS COL Application in Proposed Contention 6. In fact, BREDL

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312 *Id.* at 28-29.

313 *See* 10 C.F.R. §§ 52.77 - 52.80.

314 *See id.* § 52.97.

does not even acknowledge Section 10.4.1 of the WLS ER that describes, in detail, the benefits associated with the construction and operation of WLS. As such, BREDL not only raises issues beyond the scope of this proceeding and unrelated to applicable regulatory requirements, but also fails to provide any facts to support its claim that WLS will not improve the general welfare, increase the standard of living, or strengthen free competition, contrary to 10 C.F.R. § 2.309(f)(1)(i)(vi).

1. BREDL's Allegations Regarding NRC's Ability to Identify Unspecified Hardware Failures in Operating and New Reactors are Vague, Unsupported, and Beyond the Scope of This Proceeding

In subpart 1 to Proposed Contention 6, BREDL argues that the NRC—as a generic matter—has not enforced its regulations, as indicated by, among other things, the events associated with the reactor vessel head degradation at Davis-Besse identified in 2002 and NRC testing of fire barriers.[315] Petitioner also speculates that the NRC's oversight of WLS "*may*" be inadequate.[316]

Petitioner fails, however, to provide any link between the NRC's enforcement history regarding current operating reactors and this COL Application proceeding. Further, BREDL's Petition does not identify or even allege that there are any hardware or corrective action program deficiencies in the WLS COL Application. Moreover, the Proposed Contention lacks adequate factual or expert support, contrary to 10 C.F.R. § 2.309(f)(1)(v); and fails to establish a genuine dispute with the Applicant on a material issue of law or fact, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

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315 Petition at 29-31.

316 *Id.* at 30-31 (emphasis added).

Proposed Contention 6 instead hovers over NRC's overall capability to detect hardware failures and deficiencies in both operating and new reactors, without a tether line to this proceeding. The Commission has repeatedly stated that the adequacy of a license application, not the NRC Staff's evaluation, is the pertinent safety issue in any licensing proceeding.[317] Similarly, NRC precedent makes clear that an adjudicatory proceeding is not the appropriate forum for Petitioner to state its views about NRC policy.[318] Therefore, subpart 1 to Proposed Contention 6 fails to present a litigable issue within the scope of this proceeding and does not comply with 10 C.F.R. § 2.309(f)(1)(iii) and (iv).

2. BREDL's Concerns Regarding Human Factors Are Vague, Unsupported, and Beyond the Scope of This Proceeding

In subpart 2 to Proposed Contention 6, BREDL asserts that all reactors have human operators and they are susceptible to error. It also opines that because the AP1000 "[has] not been tested in the real world," the NRC and Duke are obligated to demonstrate how they will prevent human errors at the proposed facility.[319]

Petitioner's vague claims regarding the human factors analysis for the AP1000 fail to raise any issue within the scope of this proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(vi). Human factors engineering for the AP1000 design is addressed in Section 3.2 of Tier 1 and Chapter 18 of Tier 2 in the AP1000 DCD. In accordance with 10 C.F.R. § 52.63(a)(5) and

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317 *See* Final Rule, Changes to the Adjudicatory Process, 69 Fed. Reg. at 2202; *see also Vt. Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), CLI-00-20, 52 NRC 151, 170-71 (2000) (rejecting a contention regarding the performance of the NRC Staff in overseeing the plant).

318 *See PPL Susquehanna* (Susquehanna Steam Electric Station, Units 1 and 2), LBP-07-10, 66 NRC 1, 22-23 (2007); *S. Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 252-53 (2007); *Peach Bottom*, ALAB-216, 8 AEC at 20-21, 21 n.33.

319 Petition at 31-32.

Section VI of Appendix D of 10 C.F.R. Part 52, those issues are considered resolved and, therefore, any challenge to this information is outside the scope of this proceeding.[320]

In addition, Petitioner fails to provide sufficient information to show a genuine dispute on a material issue of law or fact as it fails to reference any specific portions of the WLS COL Application that it contests, contrary to 10 C.F.R. § 2.309(f)(1)(vi). Furthermore, BREDL's fundamental argument – that the AP1000 has "not been tested in the real world"[321] – is not a valid or sufficient basis for a contention. If Petitioner's arguments were accepted, then every aspect of this new reactor design could be the subject of a contention pending its actual construction and pre-operational testing. Obviously, an argument imposing a prerequisite for actual prototypical construction has no basis in the AEA or NRC regulations.

3. BREDL's Allegations Regarding the Independence of the NRC are Unsupported and Beyond the Scope of This Proceeding

In subpart 3 to Proposed Contention 6, BREDL opines that the independence of the NRC has been compromised by the Energy Policy Act of 2005.[322] Specifically, BREDL alleges that the Energy Policy Act of 2005 has imposed upon the NRC legal requirements that are contrary to its mandate to ensure public health and safety and to protect the environment.[323] Petitioner's arguments constitute an impermissible collateral attack on the Energy Policy Act and the basic structure of the NRC regulatory process. Contentions that attack statutes that govern the NRC are clearly inadmissible.[324] Therefore, subpart 3 to Proposed Contention 6 is outside the scope of this proceeding and does not comply with 10 C.F.R. § 2.309(f)(1)(iii).

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320 *See also* New Reactor Policy Statement, 73 Fed. Reg. at 20,970 (citing 10 C.F.R. § 52.63).

321 Petition at 32.

322 *Id.* at 32-33.

323 *Id.*

324 *See Shearon Harris*, LBP-07-11, 65 NRC at 57-58 (citing *Peach Bottom*, ALAB-216, 8 AEC at 20).

In addition, the Petitioner misreads the scope of the standby support insurance provided in the Energy Policy Act of 2005. Standby support insurance covers certain delays *after* issuance of the COL, and excludes administrative litigation at the Commission related to a COL application.[325] In fact, one cannot enter into a standby support contract until *after* a COL has been issued.[326] Thus, not only are Petitioner's allegations inadmissible, but the bases for the allegations are also entirely specious.

4. BREDL's Allegations Regarding Hearing Irregularities or "Shell Games" are Unsupported and Beyond the Scope of This Proceeding

In subpart 4 to Proposed Contention 6, BREDL states that the adjudicatory licensing process is "an opaque, stilted process that has the trappings of a courtroom but too often lacks the element of impartiality."[327] In support of its argument, Petitioner includes a quote from an oral argument in another proceeding in which a member of the licensing board characterized the NRC process in that proceeding as a "shell game."[328] Based upon that quotation, the Petitioner intimates that NRC may not be impartial and independent in the WLS proceeding, although BREDL does not actually state such a concern.[329]

First, the Proposed Contention constitutes an unwarranted, unfounded attack on the licensing process as BREDL fails to provide any information suggesting that the NRC is unable to conduct an independent assessment of the WLS COL Application. Further, as with most of the other subparts of this Proposed Contention, BREDL does not identify any actual or alleged deficiencies in the WLS Application, does not identify any issue with respect to the licensing

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325 *See* 42 U.S.C. § 16014(c)(1); 10 C.F.R. § 950.14(a).

326 *See* 10 C.F.R. § 950.12(a)(2).

327 Petition at 34.

328 *Id*.

329 *Id.* at 34-36.

process for WLS, and does not even mention WLS or Duke—all of which underscore the fundamentally generic nature of this Proposed Contention. Further, the Commission has repeatedly stated that the adequacy of a license application, not the NRC Staff's evaluation, is the pertinent safety issue in any licensing proceeding.[330] Similarly, NRC precedent makes clear that an adjudicatory proceeding is not the appropriate forum for Petitioner to state its views about the NRC's licensing process.[331] Therefore, Proposed Contention 6 fails to present a litigable issue within the scope of this proceeding and does not comply with 10 C.F.R. § 2.309(f)(1)(iii) and (iv).

For the foregoing reasons, Contention 6 is outside the scope of this proceeding, is immaterial, and does not demonstrate a genuine material dispute regarding the WLS Application. Therefore, the Board should reject this Proposed Contention.

7. Proposed Contention 7 – The NRC Fails to Execute Constitutional Due Process and Equal Protection

BREDL next alleges in Proposed Contention 7 that the NRC's radiation protection regulations violate the Fifth and Fourteenth Amendments of the U.S. Constitution.[332] In support of this Proposed Contention, Petitioner asserts that NRC regulations do not prevent elevated radiation exposure levels and do not protect all members of the public equally.[333] Petitioner's equal protection claim is apparently based on the assertion that children have a significantly higher risk of developing cancer from radiation than adults, that women have a higher risk of

330 *See* Final Rule, Changes to the Adjudicatory Process, 69 Fed. Reg. at 2202.

331 *See Susquehanna*, LBP-07-10, 66 NRC at 22-23; *Vogtle*, LBP-07-3, 65 NRC at 252-53; *Peach Bottom*, ALAB-216, 8 AEC at 20-21, 21 n.33.

332 Petition at 36 - 39.

333 *Id.*

radiation-induced cancer than men, but that NRC's 10 C.F.R. Part 20 regulations are based on the "reference man," although BREDL never actually cites to any NRC radiation standards.[334]

While even less clear, Petitioner's due process argument is apparently based on assertions that allowing a dose to individual members of the public of 100 mrem would mean that 3 to 4 persons per 1,000 could die if exposed over a lifetime.[335] In its due process argument, Petitioner wanders well beyond the scope of this proceeding, arguing that it is time to "revisit" the U.S. Supreme Court decision that upheld the constitutionality of the Price-Anderson Act.[336]

As demonstrated below, this Proposed Contention should be dismissed because: (1) it is outside the scope of this proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii); and (2) it does not demonstrate that a genuine material dispute exists with respect to the Application, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

Turning first to BREDL's equal protection challenge to NRC radiation dose limits, it clearly constitutes an unauthorized attack on the Commission's regulations in 10 C.F.R. Part 20. Such challenges are not permitted in agency adjudications pursuant to 10 C.F.R. § 2.335(a). Further, the NRC has previously rejected claims that its radiation exposure limits do not protect all members of the public adequately.[337] Thus, BREDL's allegation is baseless.

As for BREDL's due process challenge, it, in part, constitutes an unauthorized attack against the Price-Anderson Act. Such attacks on applicable statutory requirements are outside

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334 *Id.*

335 *Id.* at 37.

336 *Id.* at 38-39 (challenging *Duke Power Co. v. Carolina Env'l Study Group*, 438 U.S. 59 (1978)).

337 *See* Sally Shaw; Denial of Petition for Rulemaking, 72 Fed. Reg. 71,083, 71,085 (Dec. 14, 2007) ("Although some epidemiological studies have shown that children, individuals in poor health, and the elderly are more radiosensitive to radiation at high doses and high dose rates, no adverse health effects have been observed in these populations at the doses associated with NRC's radiation protection regulations.").

the scope of an adjudicatory proceeding.[338] And to the extent BREDL urges reconsideration of the U.S. Supreme Court decision upholding the Price-Anderson Act, such action is clearly beyond the authority of the Licensing Board in this proceeding.[339] Therefore, the portion of this Proposed Contention that raises due process claims also must be rejected.

Moreover, the due process challenge against the Price-Anderson Act lacks any information to show how this issue raises any dispute with the WLS Application, fails to explain why it is within the scope of this proceeding, and is silent regarding how it is in anyway material to this proceeding. BREDL fails to discuss, let alone controvert, any portion of the WLS Application that addresses compliance with radiation dose limits for individual members of the public. Thus, this Proposed Contention fails to satisfy 10 C.F.R. § 2.309(f)(1)(vi), which mandates that BREDL cite and dispute particular statements in the WLS Application.

For the foregoing reasons, this Proposed Contention is outside the scope of this proceeding and does not demonstrate that a genuine material dispute exists. Therefore, the Board should reject this Proposed Contention.

8. Proposed Contention 8 – The Assumption that Uranium Fuel is a Reliable Source of Energy is Not Supported in the Combined Operating License Application Submitted by Duke Energy to the U.S. Nuclear Regulatory Commission

BREDL alleges in Proposed Contention 8 that Duke fails to fully discuss the reliability of the uranium fuel supply in the WLS COL Application when asserting that building new nuclear power reactors is a means of achieving a reliable and cost-effective supply of

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338 *See Fla. Power & Light Co.* (St. Lucie Nuclear Power Plant, Unit No. 2), ALAB-335, 3 NRC 830, 841 n.26 (1976); *Fla. Power & Light Co.* (Turkey Point, Units 3 and 4), 4 AEC 787, 788 (1972); *Douglas Point*, ALAB-218, 8 AEC at 89; *General Elec. Co.* (GETR Vallecitos), LBP-85-4, 21 NRC 399, 402 (1985); *Pa. Power & Light Co.* (Susquehanna Steam Electric Station, Units 1 and 2), LBP-79-6, 9 NRC 291, 323-24 (1979).

339 *S.C. Elec. & Gas Co.* (Virgil C. Summer Nuclear Station, Unit 1), ALAB-710, 17 NRC 25, 28 (1983) (licensing boards are bound to comply with the directives of higher tribunals).

electricity.[340] In this regard, BREDL alleges that because "[w]orldwide uranium consumption [] has exceeded worldwide uranium production for some time," ratepayers are in "grave risk" of increased power costs due to the presumed unavailability of uranium fuel over the life of the WLS units.[341] BREDL further contends that it is "incumbent upon the applicant" to address these issues" and to show that "uranium availability will be sufficient to service the existing worldwide fleet of nuclear power reactors over the current periods of license, and in addition, the proposed [WLS] Units 1 & 2."[342]

As shown below, Proposed Contention 8 should be dismissed because it does not meet the NRC's contention admissibility criteria. In particular, the Proposed Contention lacks adequate factual or legal support, contrary to 10 C.F.R. § 2.309(f)(1)(v). In addition, the Proposed Contention fails to establish a genuine dispute with the Applicant on a material issue of law or fact, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

a. BREDL's Assertions Concerning An Alleged Shortfall in the Uranium Fuel Supply Lack a Factual Basis

Proposed Contention 8 rests precariously on the unsupported notion that global supply of uranium is insufficient to meet the combined fuel needs of the current and next generation of nuclear power plants, including the two new WLS units. As noted above, in support of this premise, BREDL cites to two pages from the World Nuclear Association's ("WNA") website that present information concerning uranium supply and demand. Closer inspection of those webpages, however, reveals that the information presented therein actually *contradicts* BREDL's

340 Petition at 39-42.

341 *Id.* at 40, 40 n.14-15 (citing http://www.world-nuclear.org/info/inf75.html?terms=uranium+supply and http://www.world-nuclear.org/info/inf23.html).

342 *Id.* at 41.

assertion that the global supply of uranium is inadequate to meet future reactor fuel needs.

For example, the first page cited by BREDL states as follows:

> Current usage is about 65,000 tU/yr. Thus, the world's present measured resources of uranium (5.5 Mt) in the cost category somewhat below present spot prices and used only in conventional reactors, *are enough to last for over 80 years*. This represents a higher level of assured resources than is normal for most minerals. Further exploration and higher prices will certainly, on the basis of present geological knowledge, *yield further resources* as present ones are used up.[343]

On that page, the WNA further explains that, while uranium exploration was relatively stagnant between 1985 and 2005, the past few years have seen a "significant increase in exploration effort," as evidenced by worldwide exploration expenditures, which "could readily double the known economic resources."[344] In fact, in 2005-2006 the world's known uranium resources, as tabulated by the WNA, *increased* 15 percent.[345] Drawing from experience with other metals, the WNA concludes that "a doubling of price from present levels could be expected to create about a tenfold increase in measured resources, over time, due both to increased exploration and the reclassification of resources regarding what is economically recoverable."[346]

BREDL's reliance on the second WNA webpage cited in its Petition is also misplaced. The figure cited by BREDL merely illustrates historical uranium production and demand for the "Western" world for the period 1945-2004. The figure presents no information on forecasted production and demand for the post-2004 era. Moreover, the text immediately preceding the figure states that "[w]ith the recovery of uranium prices since about 2003, there is a lot of

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343 http://www.world-nuclear.org/info/inf75.html?terms=uranium+supply (emphasis added). Supply of Uranium: WNA, http://www.world-nuclear.org/info/inf75.html?terms=uranium+supply (emphasis added).

344 *Id.*

345 *Id.*

346 *Id.*

activity in preparing to open new mines in many countries" (*e.g.,* Canada and Australia).[347] This statement is consistent with the future uranium supply trends discussed on the WNA website described above—*i.e.*, a sizable *increase* in uranium exploration and available uranium resources, such that the supply will be sufficient to meet new reactor fuel demands.

Accordingly, Proposed Contention 8 should be dismissed because it lacks adequate factual support. The Proposed Contention rests on a patently incorrect supposition; *i.e.*, that there is likely to be a shortfall in the world uranium supply. The WNA website—the very source of information upon which BREDL relies—indicates just the opposite. As noted above, 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."[348] A petitioner's imprecise reading of a document, therefore, cannot be the basis for a litigable contention.[349] In short, the web pages cite by BREDL do not support any claim that the uranium fuel supply is insufficient or unreliable. BREDL provides no other support, references, facts, or expert opinion demonstrating that there is an genuine material dispute regarding the uranium fuel supply.

b. BREDL's Proposed Contention 8 Fails to Establish a Genuine Dispute on a Material Issue of Law or Fact by Directly Controvert the Application

As explained previously, when a petitioner alleges that an applicant has not included relevant information required by law in its license application, the petitioner must identify each failure and the supporting reasons for the petitioner's belief.[350] This pleading requirement, set forth in 10 C.F.R. § 2.309(f)(1)(vi), unambiguously directs petitioners to "include references to

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347 http://www.world-nuclear.org/info/inf23.html.

348 *See Yankee Atomic*, LBP-96-2, 43 NRC at 90, *rev'd in part on other grounds*, CLI-96-7, 43 NRC 235 (1996).

349 *Georgia Tech Research Reactor*, LBP-95-6, 41 NRC at 300.

350 10 C.F.R. § 2.309(f)(1)(vi).

the *specific* portions of the applications . . . that the petitioner disputes[.]"[351] Stated differently, an "admissible contention must explain, with specificity, particular safety or legal reasons requiring rejection of the contested [application]."[352]

In Proposed Contention 8, BREDL's "hit-and-miss" approach to contesting the Application fails to meet the pleading requirements. Specifically, in arguing that Duke has not adequately discussed the reliability of the uranium fuel supply, BREDL references—albeit with little or no explanation—three sections of the Application. Those sections include: (1) Technical Specification ("TS") 4.2.1 discussing the fuel assemblies to be used in the AP1000 reactor core;[353] (2) ER Section 5.7 discussing Uranium Fuel Cycle Impacts;[354] and (3) Environmental Report Section 9.1.2 discussing Duke's Supply-Demand Energy Balance Under the No Action Alternative.[355] As explained below, in citing these three sections of the Application, BREDL comes nowhere close to establishing a genuine dispute with the Applicant on a material issue of law or fact.

First, BREDL does not explain how TS 4.2.1 is even remotely relevant to the future reliability of the global uranium fuel supply. TS 4.2.1 describes the number and type of fuel assemblies to be installed in the WLS reactor cores. It bears no relation to the future reliability of the global uranium fuel supply. Therefore, BREDL's reference to TS 4.2.1 is misdirected and lends no support to its Proposed Contention.

With respect to ER Section 5.7, BREDL states only that "there is no discussion of the projected availability of uranium for William States Lee 1 & 2." BREDL is correct in this

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351 *Id.*

352 *Millstone,* CLI-01-24, 54 NRC at 359-60.

353 Petition at 42.

354 *Id.* at 42.

355 *Id*.

observation—because Duke is not required to include such a discussion in ER Section 5.7. As BREDL seemingly recognizes, ER Section 5.7 concerns "the *effects to the environment* from the hazards associated with the uranium fuel cycle (UFC)"[356]—not the ability of Duke to procure uranium fuel or the effects of WLS plant operation on the uranium supply.[357] Here, again, BREDL's reference to the Application is misdirected and insufficient to raise a genuine dispute.

BREDL's reference to ER Section 9.1.2 also is perplexing, if not misplaced. Section 9.1.2, including the paragraph quoted by BREDL, discusses the consequences of the no-action alternative in the context of Duke's electric supply-demand balance. As explained therein, given the electricity demand forecast, a number of implications flow from any decision not build the WLS station, assuming no other actions are taken in response. One possible consequence is that the electricity load projected to be served in the Duke service territory from the WLS station would not be served and Duke would experience a shortage of energy and capacity. In short, ER Section 9.1.2 discusses *electricity* supply-and-demand considerations within Duke's service territory in the event that the WLS station is not built. It in no way purports to discuss (nor needs to discuss) the reliability of the uranium fuel supply.

Ironically, BREDL fails to reference one portion of the ER that does relate to its alleged concerns about the reliability of the uranium fuel supply. Specifically, ER Section 10.2.2., "Irreversible and Irretrievable Commitments of Material Resources," states as follows:

> During operations, the main resources to be irreversibly and irretrievably committed would be the uranium used as fuel and the energy required to create the fuel. The [WNA] studies supply and demand for uranium and states that the world's present measured

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356 WLS COL Application, Rev. 0, Part 3, ER at 5.7-1 (emphasis added).

357 *See id.* at 5.7-1 to 5.7-2. Specifically, using information contained in ESRP Section 5.7, Table S-3 in 10 C.F.R. Part 51, and NUREG-1437, ER Section 5.7, Duke assessed the environmental impacts of proposed WLS Units 1 and 2 to those of the so-called NRC "reference plant" (by converting the reference plant values to WLS-specific values with a conservatively determined scaling factor).

> resources of uranium, in the cost category somewhat above present spot prices and used only in conventional reactors, is estimated at 4,743,000 metric tons of uranium (MTU), which is enough to last for some 70 years. Worldwide usage is estimated at 66,500 MTU/year. Very little uranium exploration occurred between 1985 and 2005, so the significant increase in exploration that is currently being seen could readily double the known economic resources. According to the World Nuclear Association, if the price of uranium should double, it could result in a tenfold increase in estimated resources over time as a result of increased exploration. As with many resources, increases in price lead to increased exploration, increased resource estimates, and price stabilization. The two AP1000 reactors to be installed at the Lee Nuclear Station would require a combined initial core fuel loading of 169 MTU, or roughly 0.004 percent of the worldwide supply and 0.25 percent of worldwide annual usage. Annual average fuel loading for the two units combined would be 24.4 MTU/year, or 0.0005 percent of the current worldwide supply and 0.07 percent of current worldwide annual usage. Therefore, the uranium needed to fuel the two reactors, while irretrievable, is likely to have a SMALL effect with respect to the long-term availability of uranium worldwide.[358]

By overlooking this section of the ER, BREDL has failed to meet its obligation to directly controvert Duke's position on this issue (the very subject of its contention) with particularized references to the Application and supporting explanation. Moreover, the foregoing excerpt from ER Section 10.2.2 relies on information obtained from the WNA website cited by BREDL. As discussed above, this information completely undermines (not supports) the alleged uranium reliability concerns raised by BREDL in Proposed Contention 8.

Finally, in another futile attempt to challenge the Application, BREDL states: "*If* there is a plan to address the failure of uranium supply during the license period for [WLS] with a substitution of plutonium fuel (MOX or mixed-oxide), this information is also missing from the COL application as filed by the applicant."[359] BREDL surmises that this is "not an undue possibility" because Duke intends to use MOX fuel at its McGuire and Catawba plants.

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[358] WLS COL Application, Rev. 0, Part 3, ER, at 10.2-2 (internal references omitted).

[359] Petition at 41 (emphasis added).

BREDL's suggestion that the potential use of MOX fuel should be discussed in the Application has no basis, insofar as Duke is not proposing to use MOX fuel at WLS.

BREDL, of all petitioners, should know better. In the *Catawba-McGuire* license renewal proceeding, the Commission dismissed a BREDL contention concerning the possible use of MOX fuel at the McGuire and Catawba facilities.[360] In so doing, the Commission held that an NRC licensing proceeding is not "an occasion for far-reaching speculation about unimplemented and uncertain plans" of applicants or licensees.[361] In short, BREDL's uncorroborated speculation does not establish a genuine dispute with the Application.

In summary, Proposed Contention 8 must be dismissed given its clear failure to meet the requirements of 10 C.F.R. § 2.309(f)(1)(v) and (vi). The very information upon which BREDL relies undermines its contention, and the particular portions of the Application it references are not germane to that contention. Insofar as the Application discusses uranium supply and demand, BREDL overlooks that discussion. There is no dispute here worthy of a hearing.

9. Proposed Contention 9 – Duke and NRC Fail to Include Adequate Protections From Aircraft Impacts at the WS Lee Site

BREDL alleges in Proposed Contention 9 that the "NRC should require that all new reactors built in the U.S. be designed to withstand an airliner impact."[362] Petitioners base this claim on a study by Argonne National Laboratory ("ANL") published in 1982 and "post-11 September era" terrorism threats.[363]

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360 *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 & 2; Catawba Nuclear Station, Units 1 & 2) CLI-02-14, 55 NRC 278 (2002).

361 *Id.* at 293.

362 Petition at 43.

363 *Id.* at 43-44.

As demonstrated below, Petitioners are directly challenging the scope of the NRC's design basis threat ("DBT") rule and the proposed aircraft impact rule.[364] Therefore, this Proposed Contention should be dismissed because: (1) it is not within the scope of this proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii); and (2) fails to show a genuine dispute exists on a material issue of law or fact, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

a. Duke is Not Required to Defend Against an Airliner Attack

A COL applicant is required to submit a physical security plan describing how the applicant will meet the requirements in 10 C.F.R. Part 73.[365] In accordance with this requirement, Duke submitted its physical security plan as part of its COL Application.[366] The regulations in 10 C.F.R. Part 73 require that a facility's onsite physical protection system be designed to protect against the DBT, as defined in 10 C.F.R. § 73.1(a).[367] In the 2007 amendment to the DBT rule, the Commission specifically considered whether to include an aircraft attack within the DBT rule and declined to do so.[368] Therefore, there is no requirement that Duke's proposed reactors defend against an airborne attack.

Nor is there a requirement that the AP1000 reactors be designed to withstand the impact from an aircraft accident. The NRC has determined that an aircraft event only needs to be taken into consideration in the design of a facility if the event results in radiological consequences greater than the 10 C.F.R. Part 100 exposure guidelines with at least a probability of occurrence

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364 *Id.* at 44-45.

365 10 C.F.R. § 52.79(a)(35).

366 WLS COL Application, Rev. 0, Part 8 (non-public).

367 10 C.F.R. § 73.55(a).

368 *See* Final Rule, Design Basis Threat, 72 Fed. Reg. 12,705, 12,710-11, 12,725 (Mar. 19, 2007).

on an order of magnitude of one-in-ten-million (1×10^{-7}) per year.[369] Furthermore, where an applicant uses conservative assumptions to estimate the probability of an aircraft event and reasonable qualitative arguments are made that the actual probability is lower than estimated, the event only needs to be considered in designing the facility if the event results in radiological consequences greater than the 10 C.F.R. Part 100 exposure guidelines with a probability that exceeds one in a million (1×10^{-6}).[370]

In accordance with these guidelines, the AP1000 DCD requires that a COL applicant referencing the design provide an analysis of aircraft hazards and requires no design changes if the probability of such an accident leading to severe consequences is less than one in a million (1×10^{-6}).[371] Duke analyzed aircraft hazards in Section 3.5.1.6 of the FSAR and conservatively showed that the total probability of an aircraft accident is less than 1.8×10^{-7} per year. BREDL does not dispute that evaluation. As a result of the analysis in FSAR Section 3.5.1.6, an accidental aircraft crash does not need to be considered as a design-basis event for the proposed AP1000 reactors.

Furthermore, there currently is no requirement that a new reactor be designed to protect against a beyond-design-basis aircraft impact.[372] The Commission considers beyond-design-basis accidents "to be so low in probability as not to require specific additional provisions in the

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369 *See* SRP §§ 2.2.1-2.2.2 at 2.2.1-2.2.2-3, 3.5.1.6 at 3.5.1.6-4 (Mar. 2007). *See also Private Fuel Storage, LLC* (Independent Spent Fuel Storage Installation), CLI-01-22, 54 NRC 255 (2001) (citing with approval the acceptance criteria in SRP §§ 2.2.1-2.2.2 and 3.5.1.6).

370 SRP at 3.5.1.6-5. *See also Consumers Power Co.* (Big Rock Point Plant), LBP-84-22, 20 NRC 601, 639-52 (1984).

371 AP1000 DCD, Rev. 16, Tier 2, § 2.2 at 2-2.

372 *See* SRP, § 3.5.1.6 (stating that if the risk from aircraft hazards is sufficiently low, then a design need not be evaluated to assure that it is protected from the potential effects of aircraft impacts).

design of a reactor facility."[373] The Petitioners fail to point to any current regulation that requires that new reactors be designed to withstand such beyond-design-basis events. To the extent the Petitioners are advocating stricter requirements than NRC rules impose, this Proposed Contention is outside the scope of the proceeding.[374]

b. The Proposed Aircraft Rule Cited By BREDL Does Not Apply to the AP1000

In support of this Proposed Contention, BREDL refers to a *proposed* NRC rule that would require that applicants for new reactor designs perform an assessment of the impact of a large, commercial aircraft.[375] As BREDL acknowledges, the proposed aircraft rule would not apply to four currently-approved standard design certifications.[376] If BREDL opposes the scope of the proposed rule, then its remedy was to submit a comment on the rule—something they have already done.[377] Should Petitioner object to the Commission's resolution of its comments, then they may seek appropriate relief outside this adjudicatory process.[378] More importantly, Commission precedent clearly establishes that a contention that is the subject of an ongoing rulemaking is outside the scope of the proceeding.[379] Therefore, consistent with these decisions, this Proposed Contention should be rejected because it is in contravention of 10 C.F.R. § 2.309(f)(1)(iii).[380]

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373 *See Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-87-12, 26 NRC 383, 393 n. 17 (1987).

374 *See Turkey Point*, LBP-01-6, 53 NRC at 159.

375 *See* Proposed Rule, Consideration of Aircraft Impacts for New Nuclear Power Reactor Designs, 72 Fed. Reg. 56,287, 56,308 (Oct. 3, 2007) ("Proposed Aircraft Impact Rule").

376 *See* Petition at 44; Proposed Aircraft Impact Rule, 72 Fed. Reg. at 56,290.

377 *See* Comment Letter from Jim Riccio *et al.* to NRC (Dec. 17, 2007), *available at* ADAMS Accession Number ML073530569. Note that the comment period on the proposed rule ended December 17, 2007.

378 *See, e.g.,* 10 C.F.R. §§ 2.206, 2.802.

379 *See Oconee*, CLI-99-11, 49 NRC at 345; *Douglas Point*, ALAB-218, 8 AEC at 85.

380 While Licensing Boards are directed to hold contentions that relate to a design certification rulemaking in abeyance, as opposed to initially denying such contentions, this is not the case with the proposed aircraft

In addition, BREDL ignores the limited scope of the proposed rule. The proposed rule only requires the submission of a description and evaluation of an aircraft impact assessment and thus, as the statement of considerations instructs, "the adequacy of the impact assessment would not be a matter which may be the subject of a contention submitted as part of a petition to intervene."[381] Accordingly, even if it were somehow appropriate to apply the proposed aircraft impact rule in this proceeding, this contention should be denied for failing to comply with 10 C.F.R. §2.309(f)(1)(iii).

For the foregoing reasons, this contention is not within the scope of this proceeding and fails to show a genuine dispute exists on a material issue of law or fact. Therefore, the Board should reject this contention.

10. Proposed Contention 10 – (A) Duke Fails to Evaluate Whether and in What Time Frame Spent Fuel Generated by Bellefonte Units 3 and 4 [sic] Can Be Safely Disposed of and (B) Even if the Waste Confidence Decision Applies to this Proceeding, It Should be Reconsidered

BREDL alleges in Proposed Contention 10A that the WLS ER is deficient because it fails to discuss the environmental implications of the lack of options for permanent disposal of the irradiated fuel to be generated by the "North Anna site [sic]."[382] Specifically, BREDL alleges that NRC has not made a reliable assessment regarding the degree of assurance that radioactive waste generated by the proposed reactors can be safely disposed of, nor when such disposal or

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impact rule. *See* New Reactor Policy Statement, 73 Fed. Reg. at 20,972. Absent a final rule, there is no requirement to address a beyond-design-basis aircraft event and thus, there is no reason to hold this contention in abeyance even if it were otherwise admissible.

381 Proposed Aircraft Impact Rule, 72 Fed. Reg. at 56,292. The Proposed Contention also fails to address Westinghouse's voluntary AP1000 aircraft impact evaluation, contrary to the requirement in 10 C.F.R. §2.309(f)(1)(vi) to reference and dispute pertinent portions of an application. *See* Letter from Robert Sisk, Westinghouse, to NRC (Apr. 3, 2008), *available at* ADAMS Accession Number ML080980257; Westinghouse, Technical Report Number 126, APP-GW-GLR-126-NS, Nuclear Island Response to Aircraft Impact (Apr. 3, 2008) (public version), *available at* ADAMS Accession Number ML080980258.

382 Petition at 45. In Proposed Contention 10A, BREDL refers to Bellefonte Units 3 and 4 and North Anna. As BREDL filed similar Proposed Contentions in the Bellefonte and North Anna COL proceedings, Duke assumes for purposes of this Answer that BREDL meant to refer to the WLS project.

off-site storage will be available.[383] BREDL further alleges that significant radioactivity releases from Yucca Mountain will occur over time and that NRC's Waste Confidence Decision, as amended, applies only to currently-operating plants.[384] As demonstrated below, this Proposed Contention should be dismissed because it is not within the scope of this proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii).

a. BREDL's Challenge to the Waste Confidence Rule is Outside the Scope of the Proceeding

This Proposed Contention represents another text-book unauthorized challenge to an existing NRC rule. NRC's Waste Confidence Rule in 10 C.F.R. § 51.23 states:

> The Commission has made a generic determination that, if necessary, spent fuel generated in *any reactor* can be stored safely and without significant environmental impacts for at least 30 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of that reactor at its spent fuel storage basin or at either onsite or offsite independent spent fuel storage installations. Further, the Commission believes there is reasonable assurance that at least one mined geologic repository will be available within the first quarter of the twenty-first century, and sufficient repository capacity will be available within 30 years beyond the licensed life for operation of *any reactor* to dispose of the commercial high-level waste and spent fuel originating in such reactor and generated up to that time.[385]

Based on the above, the Commission has clearly stated that it has confidence that waste generated by "any reactor" will be safely managed and that sufficient repository capacity will be available for such waste. Moreover, the regulatory history of the Waste Confidence Rule demonstrates an intention to cover new reactors and additional spent fuel generation beyond the capacity of the first repository. Specifically, the Commission noted that it believes that, "if the

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383 *Id*. at 45-46 (citing the Final Waste Confidence Decision, 49 Fed. Reg. 34,659 (August 31, 1984)).

384 *Id*. at 46-51.

385 10 C.F.R. § 51.23(a) (emphasis added).

need for an additional repository is established, Congress will provide the needed institutional support and funding, as it has for the first repository."[386]

Furthermore, the Commission found that "[t]he availability of a second repository would permit spent fuel to be shipped offsite well within 30 years after the expiration of these reactors' [operating licenses]. The same would be true of the spent fuel discharged from *any new generation of reactor designs*."[387] The Commission reaffirmed its 1990 findings in a 1999 Status Report on the Waste Confidence Decision.[388]

This Proposed Contention is essentially identical to contentions rejected by licensing boards in several recent 10 C.F.R. Part 52 proceedings.[389] Importantly, the NRC amended the Waste Confidence Rule in 2007 to clarify that the rule encompasses COL applications.[390] Therefore, in light of the plain language of the rule and its regulatory history, the Waste Confidence Rule applies to this proceeding for a new reactor and this Proposed Contention is an impermissible challenge to the Rule.

In addition, to the extent that it challenges the environmental impacts of the management of high-level radioactive waste, this Proposed Contention also represents an impermissible challenge to Table S-3 of 10 C.F.R. § 51.51. Commission regulations require that a COL ER use

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386 Review and Final Revision of Waste Confidence Decision, 55 Fed. Reg. 38,474, 38,502 (Sept. 18, 1990).

387 *Id.* at 38,504 (emphasis added).

388 *See* Status Report on the Review of the Waste Confidence Decision, 64 Fed. Reg. 68,005, 68,007 (Dec. 6, 1999) ("These considerations confirm and strengthen the Commission's 1990 findings and lead the Commission to conclude that no significant and unexpected events have occurred – no major shifts in national policy, no major unexpected institutional developments, no unexpected technical information – that would cast doubt on the Commission's Waste Confidence findings or warrant a detailed reevaluation at this time.").

389 *See Vogtle*, LBP-07-3, 65 NRC at 267-68; *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), LBP-04-17, 60 NRC 229, 246-47 (2004); *Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), LBP-04-18, 60 NRC 253, 268-69 (2004); *Sys. Energy Res., Inc.* (Early Site Permit for Grand Gulf ESP Site), LBP-04-19, 60 NRC 277, 296-97 (2004).

390 Final Rule, Licenses, Certifications, and Approvals for Nuclear Power Plants, 72 Fed. Reg. 49,352, 49,429 (Aug. 28, 2007) ("The NRC is revising §§ 51.23(b) and (c) to indicate that the provisions of these paragraphs also apply to combined licenses.").

the values in Table S-3 as the basis for assessing the environmental impacts of the management of high-level waste.[391] Table S-3 indicates that high-level waste will be disposed of through deep burial and at a federal repository. In accordance with 10 C.F.R. § 51.51, Section 5.7 of the WLS ER uses Table S-3 to discuss the environmental impacts of high-level waste. Petitioner attempts to attack Table S-3 by questioning whether high-level waste from WLS will be disposed of at a federal repository.[392]

Based on the above, Proposed Contention 10A is outside the scope of this proceeding because, absent a waiver, "no rule or regulation of the Commission . . . is subject to attack by way of discovery, proof, argument, or others means in any adjudicatory proceeding."[393] BREDL did not seek such a waiver.

b. BREDL's Request to Reconsider the Waste Confidence Rule is Outside the Scope of the Proceeding and Fails to Meet the Requirements for Waiver of Commission Regulations

Proposed Contention 10B is inadmissible for many of the same reasons as 10A. In Proposed Contention 10B, BREDL states that if the Waste Confidence Decision applies to this proceeding, it should be "reconsidered" in light of the alleged increased threat of terrorist attacks against U.S. facilities.[394] Once again, this Proposed Contention is an inadmissible attack on the NRC's Waste Confidence Rule and Table S-3 of 10 C.F.R. § 51.51.

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391 *See* 10 C.F.R. § 51.51(a).

392 Petitioner also references potential radioactivity releases from Yucca Mountain and the Environmental Protection Agency's ("EPA") proposed Yucca Mountain radiation release regulations (Petition at 46), but the purpose of this reference is not clear. Petitioner does not allege that potential radioactivity releases from Yucca Mountain will exceed the EPA standard or that the EPA standard is somehow inadequate. Therefore, that issue is not addressed further in this Answer.

393 10 C.F.R. § 2.335(a). The specific requirements for waiver pursuant to 10 C.F.R. § 2.335 are discussed in Section III.A.7 of this Answer.

394 Petition at 51.

Specifically, BREDL asserts that the September 11, 2001 attacks against the United Sates constitute "significant and pertinent unexpected events occur raising substantial doubts about the continuing validity" of the third and fourth findings of the revised Waste Confidence Decision.[395] Petitioner also requests that the Commission reconsider its policy not to consider the environmental impacts of terrorist attacks.[396] As described below, this Proposed Contention should be dismissed because it is outside the scope of this proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii).

Since the events of September 11, 2001, the Commission and its licensing boards have consistently held that the NRC Staff does not need to consider, as part of its environmental review, terrorist attacks on nuclear power plants.[397] In *Grand Gulf*, the Commission refused to admit a NEPA-terrorism contention in a 10 C.F.R. Part 52 licensing proceeding.[398] Relying on the reasoning in its *Oyster Creek* decision, the Commission stated:

> "The 'environmental' effect caused by third-party miscreants 'is . . . simply too far removed from the natural or expected consequences of agency action to require a study under NEPA.'" The claimed impact is too attenuated to find the proposed federal action to be the "proximate cause" of that impact.[399]

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395 *Id.* at 51-52 (citing 64 Fed. Reg. at 68,007).

396 *Id*. at 54. In support of its request for reconsideration, BREDL cites to (a) the attractiveness and vulnerability of spent fuel to terrorist attacks; (b) the Secretary of Energy's recognition of the relationship between homeland security and assured capacity for timely spent fuel disposal; (c) the Commission's statement that it would undertake a comprehensive reevaluation of the Waste Confidence findings based on "significant and pertinent unexpected events" that raise substantial doubts about the continuing validity of the findings; and (d) the 2006 decision of the 9th Circuit U.S. Court of Appeals in *San Luis Obispo Mothers for Peace v. NRC*, 449 F.3d 1016 (9th Cir. 2006).

397 *See, e.g.*, *Amergen Energy Co., LLC* (License Renewal for Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124 (2007); *System Energy Res., Inc.* (Early Site Permit for Grand Gulf ESP Site), CLI-07-10, 65 NRC 144 (2007); *Nuclear Mgmt. Co., LLC* (Palisades Nuclear Plant), CLI-07-9, 65 NRC 139 (2007); *Vogtle*, LBP-07-3, 65 NRC at 269.

398 *Grand Gulf*, CLI-07-10, 65 NRC at 146.

399 *Id.* at 146-47 (quoting *Oyster Creek*, CLI-07-08, 65 NRC at 129).

In *Oyster Creek*, the Commission expressly rejected the assertion that the Ninth Circuit's decision in *Mothers for Peace* requires the NRC and its licensees to address the environmental costs of a successful terrorist attack on a nuclear plant.[400] The Commission explained that, while it was required to comply with the Ninth Circuit's remand in the *Diablo Canyon* proceeding, it "is not obliged to adhere, in all of its proceedings, to the first court of appeals decision to address a controversial question."[401] The Commission's *Grand Gulf* and *Oyster Creek* decisions thus require that this Proposed Contention be rejected. Where a matter has been considered by the Commission, it may not be reconsidered by a Board.[402]

Further, to the extent Petitioner's request to "reconsider" the Waste Confidence Rule is treated as a request for waiver, Petitioner has not met any of the requirements for waiver pursuant to 10 C.F.R. § 2.335(b). First, Petitioner has failed to meet its burden to demonstrate the existence of "special circumstances." BREDL has not identified any *unique* circumstances relating to the WLS facility that were not considered in the rulemaking proceeding or the Commission's *Grand Gulf* and *Oyster Creek* decisions that would justify waiving the findings of the Waste Confidence Rule in this proceeding. The Commission has ruled numerous times that the NRC and licensees are not required to speculate about potential consequences of a terrorist attack on nuclear plants, including spent fuel storage. Second, Petitioner has not submitted the necessary supporting affidavit required by 10 C.F.R. 2.335(b) specifying aspects of this proceeding, as opposed to all operating or new reactors, to which application of the Waste Confidence Rule would not serve the purposes for which the rule was adopted.

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400 *See Oyster Creek*, CLI-07-08, 65 NRC at 128-29.

401 *Id.*

402 *See Va. Elec. & Power Co.* (North Anna Nuclear Power Station, Units 1 & 2), ALAB-584, 11 NRC 451, 463-65 (1980); *Vogtle*, LBP-07-3, 65 NRC at 269.

The Commission has stated unambiguously that "[w]aiver of a Commission rule is simply not appropriate for a generic issue."[403] Moreover, as described above, Petitioner's proposed basis for reconsideration of the Waste Confidence Rule is the alleged vulnerability of spent fuel to a terrorist attack which is outside the scope of environmental reviews. Accordingly, Petitioner has not met its burden regarding waiver.

For the foregoing reasons, this Proposed Contention is outside the scope of this proceeding and fails to satisfy the requirements for waiver of a regulation. Therefore, the Board should reject this Proposed Contention.

IV. BREDL HAS NOT JUSTIFIED USE OF THE HEARING PROCEDURES IN SUBPART G

The regulations in 10 C.F.R. Part 2 establish several hearing tracks. Of particular relevance to COL proceedings, Subpart L establishes informal hearing procedures and Subpart G establishes formal hearing procedures. The selection of the appropriate hearing track depends upon the nature of the contentions. 10 C.F.R. § 2.309(g) states as follows:

> A request for hearing and/or petition for leave to intervene may, except in a proceeding under 10 CFR 52.103, also address the selection of hearing procedures, taking into account the provisions of § 2.310.

In turn, Section 2.310(d) presumes use of Subpart L unless the proceeding involves:

> [R]esolution of issues of material fact relating to the occurrence of a past activity, where the credibility of an eyewitness may reasonably be expected to be at issue, and/or issues of motive or intent of the party or eyewitness material to the resolution of the contested matter [.]

When it issued these regulations, the Commission stated that given the provision in Section 2.310(d), "Subpart L procedures would be used, as a general matter, for hearings on

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[403] *Conn. Yankee Atomic Power Co.* (Haddam Neck Plant), CLI-03-7, 58 NRC 1, 8 (2003) (citing *Metro. Edison Co.* (Three Mile Island Nuclear Station, Unit 1), CLI-80-16, 11 NRC 674, 675 (1980)).

power reactor construction permit and operating license applications under Parts 50 and 52."[404] BREDL has chosen not to address the selection of *any* hearing procedures in its Petition. Therefore, by default, this proceeding should be conducted under Subparts C and L.

Moreover, BREDL largely raised issues of law that are outside the scope of this proceeding and, to the extent that they raise factual issues that pertain to WLS, none of the Proposed Contentions, if admitted, would require eyewitness or other fact-specific testimony pertaining to a past activity, motive, or intent. Therefore, under Section 2.310(d), there is no basis for applying the formal hearing procedures in 10 C.F.R. Part 2, Subpart G. Instead, the hearing procedures in 10 C.F.R. Part 2, Subpart C and L should be applied to this proceeding.

[404] Changes to Adjudicatory Process, 69 Fed. Reg. 2182, 2206 (Jan. 14, 2004).

V. CONCLUSION

For the foregoing reasons, BREDL has submitted no admissible contentions. Accordingly, its Petition must be denied.

Respectfully submitted,

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Dated in Washington, D.C.
this 22nd day of July 2008

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

In the Matter of	)	
	)	Docket Nos. 52-018 and 52-019
DUKE ENERGY CAROLINAS, LLC	)	
	)	July 22, 2008
(William States Lee III Nuclear Station, Units 1 and 2)	)	

NOTICE OF APPEARANCE OF PAUL M. BESSETTE

The undersigned, being an attorney at law in good standing admitted to practice before the courts of the District of Columbia, hereby enters his appearance in the above-captioned matter as counsel for Duke Energy Carolinas, LLC.

Respectfully submitted,

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

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DUKE ENERGY CAROLINAS, LLC	)	
	)	July 22, 2008
(William States Lee III Nuclear Station, Units 1 and 2)	)	

NOTICE OF APPEARANCE OF KATHRYN M. SUTTON

The undersigned, being an attorney at law in good standing admitted to practice before the courts of the District of Columbia, hereby enters her appearance in the above-captioned matter as counsel for Duke Energy Carolinas, LLC.

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DUKE ENERGY CAROLINAS, LLC	)	
	)	July 22, 2008
(William States Lee III Nuclear Station, Units 1 and 2)	)	

NOTICE OF APPEARANCE OF JONATHAN M. RUND

The undersigned, being an attorney at law in good standing admitted to practice before the courts of the Commonwealth of Virginia, hereby enters his appearance in the above-captioned matter as counsel for Duke Energy Carolinas, LLC.

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NUCLEAR REGULATORY COMMISSION
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
DUKE ENERGY CAROLINAS, LLC	)	Docket Nos. 52-018 and 52-019
(William States Lee III Nuclear Station, Units 1 and 2)	)	July 22, 2008

NOTICE OF APPEARANCE OF KATE BARBER NOLAN

The undersigned, being an attorney at law in good standing admitted to practice before the courts of the State of Ohio, hereby enters her appearance in the above-captioned matter as counsel for Duke Energy Carolinas, LLC.

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

In the Matter of	)	
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DUKE ENERGY CAROLINAS, LLC	)	
	)	July 22, 2008
(William States Lee III Nuclear Station, Units 1 and 2)	)	

CERTIFICATE OF SERVICE

I hereby certify that on July 22, 2008 a copy of " Duke Energy Carolinas, LLC's Answer Opposing Petition to Intervene" and Notices of Appearance for Paul M. Bessette, Kathryn M. Sutton, Jonathan M. Rund, and Kate Barber Nolan were filed electronically with the Electronic Information Exchange on the following recipients:

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