

October 28, 2010

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
Before the Atomic Safety and Licensing Board

In the Matter of)	
)	Docket No. 52-017-COL
Dominion Virginia Power, et al.)	
)	ASLBP No. 08-863-01-COL
North Anna Power Station, Unit 3)	

DOMINION’S OPPOSITION TO BREDL’S NEW CONTENTIONS

Pursuant to 10 C.F.R. § 2.309(h), Virginia Electric and Power Company, dba Dominion Virginia Power (“Dominion”), hereby answers and opposes “Intervenor’s New Contentions” (“Motion”), which the Blue Ridge Environmental Defense League (“BREDL”) filed on October 3, 2010. The two contentions that BREDL seeks to raise in its Motion are inadmissible.

Contention One, which argues for further analysis and mitigation of consumptive water use, is inadmissible because it seeks to raise issues that were considered in great depth and resolved in the North Anna Early Site Permit (“ESP”) proceeding and the resolution of which is unaffected by any new information. Moreover, even if Contention One were not barred by the findings in the ESP proceeding, it would be inadmissible as untimely because it has no relationship to any new information in Dominion’s amended Application for a combined construction permit and operating license (“COL”) and it does not meet the standards for admissibility in 10 C.F.R. § 2.309(f)(1). For example, Contention One is not supported by any information indicating that consumptive use will cause any significant environmental impact warranting further review or mitigation.

Contention Two, which challenges an exemption request in the COL Application pertaining to seismic ground motion, is inadmissible because it impermissibly challenges the NRC rules allowing such exemptions. The gravamen of Contention Two appears to be that the Commission cannot grant an exemption from Tier 1 information in a Design Control Document, but this assertion is simply at odds with the NRC's rules. Contention Two is also inadmissible because it does not meet any of the pleading standards in 10 C.F.R. § 2.309(f)(1).

I. PROCEDURAL BACKGROUND

This proceeding involves the application ("Application"), submitted by Dominion on behalf of itself and Old Dominion Electric Cooperative on November 26, 2007, for a COL to construct and operate a third reactor at the North Anna Power Station ("Unit 3").¹ Dominion submitted an amendment to this Application on June 29, 2010, to incorporate the U.S. Advanced Pressurized Water Reactor ("US-APWR") design instead of the previously referenced ESBWR ("Amended Application").²

BREDL has been permitted to intervene in this proceeding.³ Although BREDL's previously admitted contentions, which related to the storage of low level waste, have since been dismissed,⁴ the Board has permitted BREDL to file new contentions arising from new information in the Amended Application by October 4, 2010. Order (Setting Deadline for Filing New Contentions Based on New Information in the Applicant's June 29, 2010 Revision to the

¹ See North Anna 3 Combined License Application (Rev. 0, Nov. 2007), ADAMS Accession No. ML073320913.

² See Letter from D. Lewis to ASLB (July 1, 2010) (notifying the Board and Parties of the Amended Application and transmitting a copy on DVD); see also Letter from E. Grecheck to NRC, Combined License Application – Submissions 6 and 7 (June 28, 2010) (ADAMS Accession No. ML101820627).

³ LBP-08-15, 68 N.R.C. 294 (2008).

⁴ LBP-10-17, 72 N.R.C. ____, slip op. (Sept. 2, 2010).

License Application) (Aug. 11, 2010) at 7 (“August 11 Order”). That Order reflects the Board’s expectation that any such filing should provide sufficient information for the Board to evaluate all of the factors listed in 10 C.F.R. § 2.309(c). *Id.* at 6. On October 3, 2010, BREDL filed its Motion proffering two new contentions.

The Application, both as originally submitted and as amended, references an ESP issued in 2007 that approves the North Anna site as suitable for additional units falling within certain parameters.⁵ The ESP was not based on a specific reactor design. Instead, it used a plant parameter envelope (“PPE”), which is “a set of values of plant design parameters that an ESP applicant expects will bound the design characteristics of the reactor or reactors that might be built at a selected site.” LBP-08-15, 68 N.R.C. at 322 (footnote omitted).⁶

Under the NRC rules, this ESP resolves all site suitability issues (such as the topics addressed in Chapter 2 of a safety analysis report) with the exception of compliance with certain Combined License Action Items set forth in Appendix C of the ESP, variances⁷ sought in the Application, and any substantial new information on emergency planning. The ESP also resolves the environmental issues relating to the construction and operation of nuclear units at the ESP site addressed in the NRC’s Final Environmental Impact Statement for an Early Site Permit (ESP) at the North Anna ESP Site, NUREG-1811 (Dec. 2006) (“ESP-FEIS”), with the exception of issues that were deferred or identified as open items in the ESP-FEIS, and any environmental issue involving the construction or operation of the facility for which significant

⁵ ESP-003, Docket No. 52-008 (Nov. 27, 2007), ADAMS accession No. ML073180440.

⁶ The plant parameter envelope is described in sections 1.1.3 and 3.2 and Table 3.1-9 of the ESP Environmental Report (“ESP-ER”).

⁷ A variance is a plant-specific departure from one or more of the site characteristics, design parameters, or terms and conditions of an early site permit. See 10 C.F.R. § 52.39(d).

new information has been identified. See generally 10 C.F.R. § 52.39; see also Final Rule, Licenses, Certifications, and Approvals for Nuclear Power Plants, 72 Fed. Reg. 49,352, 49,431 (Aug. 28, 2007).⁸

The Application, both as originally submitted and as now amended, also references a standard design for which a design certification application is under review. As a result of the June 29, 2010 amendment, the Amended Application now references the application by Mitsubishi Heavy Industries, Ltd. for design certification of its US-APWR design – a 4,451 MWt pressurized water reactor. See Amended Application, Part 1 at 1.

II. APPLICABLE LEGAL STANDARDS

A. Standards for New Contentions

As a general matter, the NRC does not look with favor on amended or new contentions filed after the initial filing. Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-36, 60 N.R.C. 631, 636 (2004). As the Commission has repeatedly stressed,

our contention admissibility and timeliness rules require a high level of discipline and preparation by petitioners “who must examine the publicly available material and set forth their claims and the support for their claims at the outset.” There simply would be “no end to NRC licensing proceedings if petitioners could disregard our timeliness requirements” and add new contentions at their convenience during the course of a proceeding based on information that could have formed the basis for a timely contention at the outset of the proceeding. Our expanding adjudicatory docket makes it critically important that parties comply with our pleading requirements and that the Board enforce those requirements.

⁸ The NRC has issued a supplemental EIS in this COL proceeding addressing issues that were deferred or unresolved in the ESP proceeding, and evaluating whether there is any new and significant information affecting findings on environmental issues that were resolved in the ESP proceeding. NUREG-1917, Supplemental Environmental Impact Statement for the Combined License (COL) for North Anna Power Station Unit 3 (Feb. 28, 2010) (ADAMS Accession No. ML100680117) (“COL-SEIS”).

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 N.R.C. 235, 271-72 (2009) (footnotes omitted).

In keeping with this policy, new contentions (other than those challenging new data or conclusions in an environmental impact statement – a situation not applicable here) may be added only by leave of the presiding officer, upon a showing that:

- (i) The information upon which the amended or new contention is based was not previously available;
- (ii) The information upon which the amended or new contention is based is materially different than information previously available; and
- (iii) The amended or new contention has been submitted in a timely fashion based on the availability of the subsequent information.

10 C.F.R. § 2.309(f)(2). Further, 10 C.F.R. § 2.309(c) provides that untimely contentions will not be entertained absent a determination that the contention should be admitted based on a balancing of the following factors:

- (i) Good cause, if any, for the failure to file on time;
- (ii) The nature of the requestor's/petitioner's right under the Act to be made a party to the proceeding;
- (iii) The nature and extent of the requestor's/petitioner's property, financial or other interest in the proceeding;
- (iv) The possible effect of any order that may be entered in the proceeding on the requestor's/petitioner's interest;
- (v) The availability of other means whereby the requestor's/petitioner's interest will be protected;
- (vi) The extent to which the requestor's/petitioner's interests will be represented by existing parties;
- (vii) The extent to which the requestor's/petitioner's participation will broaden the issues or delay the proceeding; and
- (viii) The extent to which the requestor's/petitioner's participation may reasonably be expected to assist in developing a sound record.

In this proceeding, the Board has held that the factors in 10 C.F.R. § 2.309(c) apply only to contentions that are deemed untimely under the standards in 10 C.F.R. § 2.309(f)(2). LBP-09-27, 70 N.R.C. ___, slip op. at 6-7 (Nov. 25, 2009). Thus, under the law of this case,⁹ if any of BREDL's contentions do not meet the standards in 10 C.F.R. § 2.309(f)(2), they cannot be admitted unless BREDL demonstrates that the lateness factors in Section 2.309(c) are met. Further, as the Board has previously held, if BREDL fails to address the Section 2.309(c) factors, the Board will not manufacture arguments for BREDL that it has not made itself.¹⁰

Even if a petitioner satisfies the requirements of 10 C.F.R. § 2.309(f)(2) and 10 C.F.R. § 2.309(c), it must also demonstrate that its new contention satisfies the standards for admissibility in 10 C.F.R. § 2.309(f)(1)(i)-(vii). Sacramento Municipal Utility District (Rancho Seco Nuclear Generating Station), CLI-93-12, 37 N.R.C. 355, 362-63 (1993). That rule requires that an admissible contention:

- (i) Provide a specific statement of the issue of law or fact to be raised or controverted;

⁹ Dominion has previously taken the position that any new contention must meet the standards in both 10 C.F.R. § 2.309(f)(2) and 10 C.F.R. § 2.309(c). See, e.g., Dominion's Answer Opposing BREDL's Contention 10 (July 21, 2009) at 3-4 n.2. While Dominion respectfully submits that the Board's ruling in LBP-09-27 is inconsistent with the language in 10 C.F.R. § 2.309(f)(2) allowing addition of new contentions "only upon a showing" of compliance with the standards in 10 C.F.R. § 2.309(f)(2)(i)-(iii) (which implies that 10 C.F.R. § 2.309(c) should not be construed as an exception to 10 C.F.R. § 2.309(f)(2)), Dominion accepts the Board's prior ruling as the law of the case.

¹⁰ See Order (Denying Motion to Admit Proposed Contention Nine) (June 2, 2009) at 6. This ruling by the Board is consistent with longstanding precedent. The failure to address these factors by itself warrants denial of the Contention. Late contentions that fail to address these criteria are subject to summary dismissal. Baltimore Gas & Electric Co. (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 N.R.C. 325, 347 & n.10 (1998); Boston Edison Co. (Pilgrim Nuclear Power Station), ALAB-816, 22 N.R.C. 461, 465-66 (1985) ("[G]iven its failure even to address the . . . lateness factors, [a] [late] intervention petition [is] correctly denied because it [is] untimely"). "[T]he burden of persuasion on the lateness factors is on the tardy petitioner and . . . in order to discharge that burden, the petitioner must come to grips with those factors in the petition itself." Id. at 466 (footnote omitted). "Late petitioners properly have a substantial burden in justifying their tardiness." Nuclear Fuel Services, Inc. (West Valley Reprocessing Plant), CLI-75-4, 1 N.R.C. 273, 275 (1975). "[T]he late petitioner must address each of [the] five factors and affirmatively demonstrate that, on balance, they favor permitting his tardy admission to the proceeding." Duke Power Co. (Perkins Nuclear Station, Units 1, 2 and 3), ALAB-615, 12 N.R.C. 350, 352 (1980) (citations omitted).

- (ii) Provide a brief explanation of the basis for the contention;
- (iii) Demonstrate that the issue raised in the contention is within the scope of the proceeding;
- (iv) 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;
- (v) Provide a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue; and
- (vi) Provide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact. This information must include references to specific portions of the application (including the applicant's environmental report and safety report) that the petitioner disputes and the supporting reasons for each dispute, or, if the petitioner believes that the application fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioner's belief.

10 C.F.R. §§ 2.309(f)(1)(i)-(vi).¹¹

B. Standards for Contentions Addressing Issues Resolved in an ESP Proceeding

Under NRC regulations, “if the application for the . . . combined license references an early site permit, the Commission shall treat as resolved those matters resolved in the proceeding on the application for . . . the early site permit” subject to certain limited exceptions. 10 C.F.R. § 52.39(a)(2). 10 C.F.R. § 52.39(c)(1) identifies these limited exceptions that may be considered in a hearing on a COL application:

- (i) The nuclear power reactor proposed to be built does not fit within one or more of the site characteristics or design parameters included in the early site permit;

¹¹ Dominion's Answer Opposing Petition for Intervention and Request for Hearing by [BREDL] (June 3, 2008) provides a further discussion of these standards, which will not be repeated here.

(ii) One or more of the terms and conditions of the early site permit have not been met;

(iii) A variance requested under paragraph (d) of this section is unwarranted or should be modified;

(iv) New or additional information is provided in the application that substantially alters the bases for a previous NRC conclusion or constitutes a sufficient basis for the Commission to modify or impose new terms and conditions related to emergency preparedness; or

(v) Any significant environmental issue that was not resolved in the early site permit proceeding, or any issue involving the impacts of construction and operation of the facility that was resolved in the early site permit proceeding for which significant new information has been identified.

In LBP-08-15, this Board set forth the legal standard for evaluating whether an issue was “resolved” in the ESP proceeding:

Taking into account both the relevant language of the regulations and the Commission’s evident intent in promulgating those provisions, we agree with the Staff that a matter need not be actually litigated in order to be “resolved” in an ESP proceeding. If the matter was decided by the Staff in the ESP proceeding, concerns an issue that the Staff was required to resolve at that stage, and could have been litigated in the ESP proceeding, the matter is deemed “resolved” by the ESP proceeding even if the issue was not actually litigated. In reaching this conclusion, we note that 10 C.F.R. § 51.50(c)(1), quoted above, provides that the environmental report (ER) for the COL stage need not contain information or analyses concerning matters that were “resolved” in the EIS for the ESP. The EIS is prepared by the NRC Staff and is based, at least in part, on information in the ER. Thus, an issue can be “resolved” within the meaning of section 51.50(c)(1) even though there might have been no litigation concerning that issue, if the NRC Staff adequately addressed the matter in an EIS. The term “resolved” should be given the same meaning in section 52.39(a)(2), given that both provisions concern the relationship between ESP and COL proceedings.

...

We hasten to add, however, that in order for an issue to have been resolved during an ESP proceeding, the issue must have been examined and decided by the Staff, not just referred to without reaching a conclusion. Moreover, the issue must be one that was necessary for the Staff to resolve under the regulations governing ESPs (10 C.F.R. Part 52, Subpart A). Mere excursions by the Staff into issues that need not be resolved at the ESP stage are not sufficient to justify precluding parties from litigating those issues in a COL proceeding.

...
Therefore, we will treat BREDL's contentions as resolved during the ESP proceeding for the North Anna site if (1) the subject of the contention was actually litigated and decided during the ESP proceeding; or (2) the subject of the contention, although not actually litigated, was decided by the Staff, was necessary for the Staff to resolve in the ESP proceeding, and was within the scope of that proceeding as defined in the Federal Register notice of opportunity for a hearing. We must treat any contention resolved during the ESP proceeding as resolved in this COL proceeding unless one of the exceptions listed in section 52.39 applies.

LBP-08-15, 68 N.R.C. at 309-311 (footnote omitted).

III. ARGUMENT

A. Contention One is Inadmissible

BREDL's Contention One, which alleges that consumptive water use requires significant additional review and that NEPA requires consideration of alternatives (presumably to further mitigate consumptive water use)¹² is inadmissible because these issues (1) are outside the scope of this proceeding, having been resolved in the ESP proceeding; (2) are untimely because they do not arise from the new information in the Amended Application; and (3) fail to satisfy the contention admissibility requirements in 10 C.F.R. § 2.309(f)(1).

1. Contention One Raises Issues Outside the Scope of This Proceeding

Under NRC regulations, as discussed above, environmental issues resolved in an ESP proceeding may not be raised in a COLA proceeding referencing the ESP absent significant new information. 10 C.F.R. § 52.39(a)(2), (c)(1)(v). The two issues raised in Contention One –

¹² BREDL's Contention One has a heading stating "The Environmental Review is Insufficient." Motion at 2. Dominion assumes that this heading, which is overly broad and totally vague, is not intended to constitute BREDL's contention, and has therefore focused on BREDL's "statement of law or fact to be raised or controverted" as identifying the substance of BREDL's contention.

consumptive water use and consideration of alternatives – were both resolved in the ESP proceeding,¹³ and BREDL has not raised any new information relating to them. Thus, they are outside the scope of this proceeding, and Contention One fails to satisfy 10 C.F.R. § 2.309(f)(1)(iii).

a. Consumptive Water Use

Issues relating to consumptive water use are outside the scope of this proceeding because they were resolved in the ESP proceeding. Dominion evaluated plant water use in Section 3.3 of the ESP-ER and summarized water consumption in Table 3.3.1. ESP-ER at 3-3-49 to 3-3-52. The NRC Staff conducted an independent analysis of water use in the ESP-FEIS and came to the following conclusion:

Based on the foregoing, including Dominion’s commitment to be bounded by the [plant parameter envelope] values for consumptive water use, the staff concludes that during normal water years the water use impacts, including impacts on downstream users, would be SMALL, and mitigation is not warranted. During severe droughts, however, the impact to the water level could be temporarily MODERATE. . . . Given the infrequent and temporary nature of the severe drought conditions, the fact that the minimum operational lake level elevation is 73.8 m (242 ft) MSL, and that lake level would return to normal with normal precipitation, further mitigation other than ceasing or derating operation is not warranted.

ESP-FEIS at 5-11 to 5-12.

BREDL does not identify any exception that would allow this previously resolved issue to be considered in this COL hearing. In particular, BREDL does not identify any significant

¹³ Both of these issues were required to be addressed in the ESP proceeding. The NRC rules in effect when the North Anna ESP was issued required an ESP application to include “a complete environmental report as required by 10 CFR 50.45 . . .” subject to certain exceptions (need for power, alternative energy sources) not applicable here. See former 10 C.F.R. § 52.17(a)(2). Essentially the same requirement is contained in the current NRC rules, at 10 C.F.R. § 52.17(a)(2) and 10 C.F.R. § 51.50(b). 10 C.F.R. § 51.45(b)(1) and (3) require such an ER to address environmental impacts and alternatives, respectively.

new information that would warrant further environmental review of consumptive water use under 10 C.F.R. § 51.50(c)(1) and 10 C.F.R. § 52.39(c)(1)(v).

BREDL does not identify any change in the Unit 3 cooling system proposed and evaluated in the ESP proceeding. Nor can it. As the current Environmental Report¹⁴ states, “[t]he Unit 3 cooling system is a closed-cycle, hybrid cooling system, as described in ESP-ER Section 3.4.” COL-ER at 3-66 (emphasis added).

Similarly, BREDL does not and cannot claim that the rejected heat load (the amount of heat that must be dissipated by this cooling system, which determines consumptive use) is greater than what was evaluated in the ESP proceeding. The PPE in the ESP proceeding specified a postulated Condenser/Heat Exchanger Duty (the waste heat rejected from the main condenser and auxiliary heat exchangers during normal plant duty at full station load), which was used to evaluate the impacts associated with dissipation of this waste heat (see ESP-ER at 3-5-13), and Table 3.0-2 of the COL-ER¹⁵ shows that this parameter continues to bound the new design. COL-ER at 3-20.

BREDL’s suggestion that the electrical rating of the US-APWR¹⁶ implies that it will therefore have a greater heat load (see Gundersen Decl., ¶¶ 16, 18.2) is specious. First, as

¹⁴ North Anna 3 Combined License Application, Part 3: Applicant’s Environmental Report – Combined License Stage (Rev. 3, June 2010) (“COL-ER”).

¹⁵ Table 3.0-2 of the COL-ER provides a comparison of the design parameters assumed in the ESP proceeding versus the Unit 3 design characteristics specified in the Amended Application.

¹⁶ Mr. Gunderson refers to the US-APWR 1700 MWe unit. Gundersen Decl., ¶¶ 13, 55. The 1700 MWe value to which Mr. Gunderson refers is the upper bound identified in the US-APWR DCD for the standard plant design and is dependent on plant conditions. See US-APWR DCD at 1.2-22 (The turbine-generator has an output ranging from 1600 MWe to 1700 MWe depending on plant conditions). Dominion has chosen a smaller turbine for Unit 3. See Amended Application, Part 7 (Departures Report) at 1-22. As a result of the selected turbine and plant conditions, the gross electrical output of the US-APWR proposed for North Anna Unit 3 is 1584 MWe. Amended Application, Part 2 (FSAR), Table 10.1-1R.

previously stated, the evaporation rate from the cooling towers was calculated based on a postulated Condenser/Heat Exchanger Duty specified in the PPE (not on the electrical rating, which was not even a PPE parameter¹⁷), and this PPE value remains bounding. COL-ER at 3-20 (Table 3.0-2). In any event, the rejected heat load (i.e., the amount of heat that has to be removed through the cooling towers and thus contributes to evaporative loss) is the difference between the plant's thermal power rating minus the gross electrical output (the amount of thermal power converted to electricity). Here, the thermal rating of the US-APWR is 4,451 MWt, which is smaller than the 4,500 MWt PPE value considered in the ESP proceeding (and likewise smaller than the 4,500 MWt rating of the ESBWR). See COL-ER at 3-37 (Table 3.0-2).

BREDL's statement that the new PWR design has a lower thermodynamic efficiency (Motion at 4), which seems to be implying that the US-APWR would have more of its thermal output dissipated as waste heat than the ESBWR, is similarly misleading and is unsupported by Mr. Gundersen's Declaration. While Mr. Gundersen states that "the new PWR design has a lower thermodynamic efficiency (discussed in detail below)" (Gundersen Decl. ¶ 19.1), his ensuing discussion merely states that "nuclear plants are inherently less efficient than oil, natural gas and coal fired plants because of the Carnot cycle." Gundersen Decl., ¶ 30 (emphasis added). Thus, there is no basis for BREDL's insinuation that PWRs are less efficient than BWRs (which is demonstrably not the case¹⁸). Moreover, it bears repeating that the evaluation of water

¹⁷ See COL-ER, Table 3.0-2.

¹⁸ A comparison of the US-APWR and the ESBWR shows that this is not the case. The 4500 MWt ESBWR, which has a gross electrical power output of approximately 1594 MWe (Application, FSAR (Rev. 1) at 1-6), would convert approximately 35% of the core power into electricity (1594 MW/4500 MW). The 4451 MWt US-APWR, which for Unit 3 will have a gross electrical output of 1584 MWe, would convert approximately 36% of the core power into electricity (1584 MW/4451 MW). Because the US-APWR has a lower thermal rating than the ESBWR and is slightly more efficient, it produces less waste heat than the ESBWR.

consumption in the ESP proceeding was not based on a BWR, but on a PPE that bounded characteristics of multiple designs, including both PWRs and BWRs.

Finally, none of the numbers bandied about in Mr. Gundersen's Declaration reflect any change from the ESP proceeding. The Condenser/Heat Exchange Duty ($\leq 1.03 \times 10^{10}$ Btu/hr), to which Mr. Gundersen refers in paragraph 19.2 of his Declaration, is the same bounding value used to calculate consumptive water use in the ESP proceeding. See COL-ER at 3-20 (Table 3.0-2). Similarly, the Make-Up Flow Rate (22,268 gpm maximum when the hybrid cooling tower system is operated in the Energy Conservation mode¹⁹), to which Mr. Gundersen refers in paragraph 19.4 of his Declaration, is the same bounding value used in the ESP proceeding. COL-ER at 3-21 (Table 3.0-2).²⁰ Likewise, the Blowdown Flow Rate (5565 gpm maximum when operating in the Energy Conservation mode) is the same bounding value used in the ESP proceeding. COL-ER at 3-23 (Table 3.0-2).²¹

The only parameter associated with the hybrid cooling tower system that has changed since the ESP proceeding is one that BREDL has not addressed, and equally importantly, one

¹⁹ As described in the ESP-ER, the hybrid cooling tower system selected in the ESP proceeding, which is a closed cycle combination of wet and dry cooling towers, is operated in two modes: (1) The Energy Conservation (EC) mode, where dry cooling is turned off and the wet towers are relied upon for heat removal; and (2) the Maximum Water Conservation (MWC) mode, where a minimum of one-third of the heat would be removed by the dry towers with the remaining being removed as required by the wet towers. ESP-ER at 3-3-58. The EC mode is used when the lake level is at or above 250 ft msl. The MWC mode is used if the lake level drops below 250 ft and is not restored within a reasonable period (assumed to be 7 days). Id.; see also ESP- FEIS, § 3.2.2.

²⁰ In paragraphs 19.5 and 19.6 of his Declaration, Mr. Gundersen multiplies this "maximum value" by the number of minutes in a day and number of days in a year to produce inflated estimates of the daily and annual water withdrawal. His calculations are specious because the maximum make-up flow rate does not occur continuously, and the hybrid cooling tower system has lower maximum make-up flow during the periods in which it is operated in the Maximum Water Conservation Mode.

²¹ Again, in paragraph 20 of his Declaration, Mr. Gundersen incorrectly multiplies this "maximum value" by the number of minutes in a hour and number of hours in a year. Since this maximum blowdown rate does not occur continuously or when the cooling tower system is operated in the Maximum Water Conservation Mode, Mr. Gundersen's calculations do not make sense. Because the annual make-up flow calculated by Mr. Gundersen (see note 20 supra) and the annual blowdown rate calculated by Mr. Gundersen are both incorrect, his quantification of the annual consumptive water use in paragraphs 20.1 and 21 are incorrect and meaningless.

that the NRC Staff has found not to constitute new and significant information. Indeed, as discussed below, this parameter (the average annual evaporation rate) has changed because the impacts of consumptive use (the frequency of lowered lake level and downstream flow) have been reduced.

In the ESP proceeding, Dominion calculated an average annual evaporation rate of 8707 gpm from the hybrid cooling tower system, based on the characteristics of the cooling tower system (which have not changed) under ambient conditions in the EC and MWC modes and the frequency in which the system would be operated in these modes (which depends on the frequency of lake level going below 250 feet msl). ESP-ER at 3-3-39, 3-3-58, 3-5-6, and 3-5-13. This average annual evaporation rate was used to calculate the extent to which Unit 3 operation would increase the frequency of lowered lake level and reduced down stream flow. See id. at 3-5-14, 3-5-16; ESP-FEIS at 5-10 and App. K. In addition, during the ESP proceeding, Dominion evaluated the possibility of increasing the lake level to further mitigate these impacts (ESP-ER at 3-5-194; ESP-FEIS at 5-16), and agreed, as part of the Commonwealth of Virginia's conditional concurrence with Dominion's certification under the Coastal Zone Management Act (CZMA), to perform an Instream Flow Incremental Methodology Study ("IFIM") to evaluate such surface water management options. See ESP-FEIS at 1-11.²² In July 2009 (well over a year ago), Dominion amended the COL-ER to provide the results of and agreed-upon actions from the IFIM Study. See Letter from Dominion to NRC, Combined License Application Submission 5 (July 29, 2009) (ADAMS Accession No. ML092160526). This previous amendment to the Environmental Report reflected Dominion's agreement to raise the lake level by three inches

²² See also Letter from Dominion to NRC, Federal Consistency Certification Under the Coastal Zone Management Act (Nov. 22, 2006) (ADAMS Accession No. ML063340076), attaching Virginia's conditional concurrence with the CZMA certification.

when Unit 3 begins operation (COL-ER (Rev. 2, July 2009) at 5-34), which will reduce the frequency of lowered lake levels and the frequency of minimal flow (20 cfs) released from the dam (*id.* at 5-36 to 5-37).²³ Because the 3-inch increase in the normal lake level reduces the frequency of the hybrid cooling tower system being operated in the MWC mode (i.e., the frequency when the lake goes below 250 feet), the average annual evaporation rate calculated for the hybrid cooling system increases, but the overall effect is a decrease in incidence of lowered lake levels and minimum dam release compared with the estimates provided in the ESP proceeding.²⁴ See COL-ER at 3-22;²⁵ COL-SEIS at 3-4, 5-5, 5-14.

The Staff reviewed this information in its COL-SEIS (issued in February 2010), including the slightly increased annual average evaporation with a higher lake level, and concluded that there was no information that was both new and significant – no information that would change the Staff’s prior findings on the impacts of water use. COL-SEIS at 5-4, 5-5-14, 5-15. Because the change in the annual average evaporation is not associated with any increase in environmental impacts, and because BREDL has not challenged the Staff’s determination that the slight change in this parameter is not significant, it provides no basis for reopening the issue of consumptive water use resolved in the ESP proceeding. See 10 C.F.R. § 52.39(c)(1)(v); 10 C.F.R. § 51.50(c)(1)(iii). Certainly, BREDL has provided absolutely no information explaining

²³ For example, with the pool level raised by 3 inches to Elevation 250.25 ft msl, and Unit 3 operating, the percent of time the lake level would lower to Elevation 248 ft msl or less is 5.5 percent, versus 6.3 percent if the pool level remained at Elevation 250.0 ft msl. COL-ER (Rev. 2, July 2009) at 5-36. Similarly, with the pool level raised by 3 inches to Elevation 250.25 ft msl, and Unit 3 operating, the percentage of the time that water released from the Lake Anna Dam would be reduced to the minimum 20 cfs flow is 5.7 percent, versus 6.5 percent if the pool level remained at Elevation 250.0 ft msl. *Id.*

²⁴ As discussed below, even if the change in this one parameter had been raised by BREDL (which it was not) and were considered new and significant (contrary to the Staff’s finding unchallenged by BREDL), this issue has not been timely raised because it is not associated with the change in reactor technology and could have been raised more than a year ago when Dominion submitted Revision 2 to the COL-ER providing the results of the IFIM study.

²⁵ The discussion of this parameter has not changed since submission of Revision 2 to the ER in July 2009. See COL-ER (Rev. 2, July 2009) at 3-21.

why any of the exceptions in 10 C.F.R. § 52.39 apply. Therefore, BREDL may not challenge Dominion's consumptive water use analysis in this COL proceeding.

b. Consideration of Alternative Heat Dissipation Systems

The consideration of alternative heat dissipation systems is also an issue that was addressed and resolved in the ESP proceeding, and is therefore outside the scope of this COL proceeding. In addition to the evaluation of the proposed hybrid cooling tower system, Section 9.4.1 of Dominion's Environmental Report in the ESP proceeding evaluated a range of alternative heat dissipation systems for Unit 3, including (1) once through cooling; (2) once through cooling with a helper tower; (3) a natural draft cooling tower system; (4) a mechanical draft cooling tower system; (5) spray ponds; and (6) a dry tower system. ESP-ER at 3-9-13 to 3-9-16 and 3-9-22 to 3-9-30.²⁶

The NRC's FEIS also evaluated alternative heat dissipation systems. ESP-FEIS, § 8.2.

The evaluation in the ESP-FEIS included a dry cooling system, but concluded:

A dry cooling tower designed to dissipate heat may reduce water-related impacts of operating Unit 3, but it also has some disadvantages. In particular, dry cooling systems are more expensive to build and are not as efficient as wet cooling systems. To achieve the necessary cooling, dry systems move a large amount of air through a heat exchanger, and the fans that force the air through the heat exchanger use a significant amount of power. Dominion estimates that the power needed to operate dry cooling towers would be 8.5 to 11 percent of the plant power output (Dominion 2006). The power needed to operate a dry tower for Unit 3 would be about 150 MW(e). This power demand reduces the net power output of the plant. The power needed for operating the combination wet and dry cooling system would be 1.7 to 4 percent. This, in turn, would increase the environmental impacts of fuel use and spent fuel transport and storage. The fans and the large volume of air required for cooling also result in elevated noise levels. The dry cooling tower would also occupy more land than a once-through or wet tower cooling system.

²⁶ Dominion's evaluation of alternatives considered the impacts from cooling tower plumes, to which Mr. Gundersen refers in paragraph 43.3 of his Declaration. ESP-ER at 3-9-23, 3-9-26, 3-9-30. The impacts of plumes from the hybrid cooling tower system was also analyzed in depth. *Id.*, §§ 5.3.3.1, 5.3.3.2.1. The NRC Staff's FEIS also considered these impacts. ESP-FEIS, §§ 5.2, 5.4.1.1, 5.5.1.4.

The staff concludes that based on its analysis that Lake Anna could support Unit 3 using a combination wet and dry cooling system and given the environmental impact of increased use of resources needed by using a less efficient dry cooling system, a combination wet and dry cooling system is preferable to a dry cooling system for Unit 3.

ESP-FEIS at 8-4 to 8-5.

The ESP-FEIS does not identify any open or unresolved issue related to the evaluation of alternative heat dissipation systems. Thus, issues relating to the analysis of alternative heat dissipation systems were resolved in the ESP proceeding and may not be challenged in the COL proceeding unless there is new and significant information. 10 C.F.R. § 52.39(a)(2), (c)(1)(v).

BREDL has not identified any new information that would allow further consideration of alternative heat dissipation systems in this COL proceeding. While Mr. Gundersen asserts that use of an air-cooled condenser would have been inadvisable for a BWR (Gundersen Decl., ¶ 18.1), this assertion is irrelevant to whether there is significant new information affecting the findings in the ESP proceeding because the findings in the ESP proceeding were not based on a specific reactor design. Rather, those findings were based on a PPE that encompassed both BWRs and PWRs. See ESP-ER at 3-3-4.²⁷ Thus, BREDL had ample opportunity to challenge the conclusion regarding dry cooling reached in the ESP proceeding, including the opportunity to raise variations (e.g., an air cooled condenser) with the dry cooling alternative analyzed in the ESP proceeding. It simply chose not to do so.

²⁷ The PPE was developed from a review of technical data from seven designs: the AP-1000, the ACR-700, the ABWR, the ESBWR, the IRSI, the GT-MHR, and the PBMR. ESP-ER at 3-3-4. As the ESP-ER explicitly states, the PPE “is not intended to be limited to these designs, but rather to provide broad overall outline of a design concept and to include other potential designs if they can be demonstrated to fall with the parameter values. . . .” Id.; see also ESP-FEIS at 3-4.

Nor is there anything else in BREDL's contention or Mr. Gundersen's Declaration that would constitute new and significant information reopening consideration of alternative heat dissipation systems. As discussed above, there is no new and significant information relating to consumptive water use. Further, despite Mr. Gundersen's references to adding an additional heat load to the lake and the temperature of the blowdown (Gundersen Decl., ¶¶ 17, 18.3, 22, 40.3, 45.1.2, 60, 68.2, 71), he never provides any information indicating that the temperature of the blowdown or its effect on the lake are any different from that evaluated in the ESP proceeding. In fact, Table 3.0-2 of the COL-ER shows that both the blowdown rate and blowdown temperature evaluated in the ESP proceeding remain bounding. COL-ER at 3-22 to 3-24. As the COL-SEIS indicates, both Dominion and the NRC Staff determined that the average temperature rise in Lake Anna caused by Unit 3 operations would be less than 0.1°F, and no new and significant information has been identified related to thermal impacts. COL-SEIS at 5-5 to 5-6.²⁸

The issue of thermal impacts was not only addressed and resolved in the ESP proceeding, but also actually litigated by BREDL. In granting summary disposition of a thermal impact contention, the Licensing Board in the ESP proceeding observed:

The Intervenors agree that Dominion's revised proposal [closed cycle cooling] will likely have "only insignificant effects on the temperature of the water within Lake Anna" and "eliminate increases" downstream.

Dominion Nuclear North Anna, LLC (Early Site Permit for North Anna ESP Site), LBP-06-24, 64 N.R.C. 360, 364 (2006). Having litigated this issue in the proceeding and having admitted

²⁸ The ESP-ER evaluated the temperature increase attributable to discharge of blowdown from the cooling towers, and determined that temperature increase at the end of the discharge canal due to the new units would be less than 0.1° F, which would dissipate to an undetectable level within a short distance of travel in the Waste Heat Treatment Facility. ESP-ER at 3-5-59. The average temperature increase attributable to the Unit 3 blowdown is estimated to be less than a hundredth of a degree Fahrenheit at the end of the discharge canal. ESP-ER at 3-5-58. In addition, the ESP-ER evaluated the potential increase in lake temperature that might occur as a result of reduced lake volume and estimated that the average increase in lake temperature from this effect would be less than 0.1° F. ESP-ER at 3-5-15.

that thermal impacts will be “insignificant,” BREDL is collaterally estopped from raising this issue anew or contending that thermal impacts are anything other than insignificant. Where an issue has already been litigated by the same party in a prior proceeding, relitigation is barred. Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), ALAB-942, 32 N.R.C. 395, 402-03 (1990); Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), LBP-82-107A, 16 N.R.C. 1791, 1808 (1982).

2. Contention One Is Untimely

Even if the issues raised in Contention One were not barred by 10 C.F.R. § 52.39 as related to matters resolved in the ESP proceeding, those issues would still be inadmissible as untimely. BREDL’s Contention One is not based on any new information in the Amended Application, and BREDL has provided no justification for admitting any late filed contention.

This Board’s August 11, 2010 Order provided BREDL with an opportunity to submit new contentions “arising from Dominion’s COLA revisions.” August 11 Order at 3. The Board gave BREDL sixty days “to review the revised COLA, determine the new information that may properly be subject to challenge in this proceeding, and prepare any new contentions based on that new information.” *Id.* at 4 (emphasis added); see also id. at 6, 7 (permitting new contentions “based on new information” in the revised COLA). Further, the Board clearly communicated its expectation that BREDL should provide sufficient information for the Board to evaluate the timeliness of any new contentions. See id. at 6. BREDL, however, has provided no information showing that Contention One is related to any new information in the Amended Application.

As discussed above, Dominion’s Amended Application does not include any change to the cooling system proposed for Unit 3. See COL-ER at 3-66 (“[t]he Unit 3 cooling system is a

closed-cycle, hybrid cooling system, as described in ESP-ER Section 3.4.") (emphasis added). It has not proposed any change in the Condenser/Heat Exchanger Duty used to evaluate the impacts associated with dissipation of this waste heat. See COL-ER at 3-20 (Table 3.0-2). It has not proposed any change in the rate of withdrawal from Lake Anna, or in the blowdown release rate. See id. at 3-21, 3-23.

As already discussed, the change of reactor technology from a BWR to a PWR is not information that affects the analysis of consumptive water use, because the evaluation of water use is based on a bounding Condenser/Heat Exchanger Duty that was established in the ESP proceeding irrespective of reactor design. For the same reason, BREDL's and Mr. Gundersen's references to the size and thermal efficiency of the US-APWR do not constitute new information affecting the previous analysis of consumptive water use or heat dissipation alternatives. The US-APWR has a slightly smaller thermal rating than the ESBWR (4,451 MWt versus 4,500 MWt for the ESBWR), is slightly more efficient than the ESBWR,²⁹ and thus obviously produces less waste heat than the ESBWR. Again, all of this is beside the point, because the bounding Condenser/Heat Exchanger Duty previously used to determine consumptive water use has not changed and is not exceeded.

As previously discussed, the only parameter relating to consumptive water use that has changed since the ESP proceeding is the average annual evaporation rate, which has been affected by Dominion's agreement to raise the lake level by three inches. That change, however,

²⁹ See note 18 supra. As previously discussed, BREDL's assertion that "the new PWR design has a lower thermodynamic efficiency" (Motion at 4) appears to be based on Mr. Gundersen's statement that "[n]uclear plants are inherently less efficient than oil, natural gas and coal fired plants because of the Carnot cycle." Gundersen Decl., ¶ 30 (emphasis added).

was made in Dominion's July 2009 amendment of the COL-ER,³⁰ well over a year ago, and is entirely unrelated to, and unaffected by, the subsequent change in reactor design. Therefore, even if BREDL had sought to base its new Contention One on the change in this one parameter (which it did not, having not even mentioned this parameter), it would still be untimely.

Likewise, BREDL's reference to the discussion of copper and TBT in blowdown (Motion at 3, 5) is not new information arising from the Amended Application. The paragraph that BREDL quotes from page 5-2 of the COL-ER has not changed from previous revisions (as indicated by the absence of any change bar in the margin), and in fact, this exact paragraph was included in Revision 0 of the COL-ER submitted with the original Application in November 2007. COL-ER (Rev. 0, Nov. 2007) at 5-2. Thus, this information has been available for nearly three years. This information was also addressed by the NRC in its COL-SEIS published in February 2010. COL-SEIS at 3-11, 5-6.³¹

Because the issues raised in Contention One did not arise out of Dominion's June 2010 COLA amendment and are therefore untimely, BREDL was required to address the late-filed contention factors in 10 C.F.R. § 2.309(f)(2) and 10 C.F.R. § 2.309(c). BREDL failed to address these factors at all, let alone show that they were satisfied. BREDL's failure to address these factors is sufficient grounds by itself to reject Contention One. See cases cited in note 10 supra.

³⁰ See COL-ER (Rev. 2, July 2009) at 3-21 and § 5.10.1.

³¹ BREDL further alleges that "[w]ater returned to the lake as blowdown would have approximately four times higher concentrations of pollutants and minerals than the water which was withdrawn." Motion at 5. BREDL states that it derived these numbers from ER Table 3.0-2 (id. at 4) and appears to arrive at that ratio by dividing the 22,000 gallons of water per minute that BREDL alleges will be withdrawn from Lake Anna (id.) by the 5,500 gallons of water per minute that BREDL claims will return to Lake Anna as blowdown (id.). Since the withdrawal and blowdown rates in Table 3.0-2 have not changed (and in fact are the bounding values postulated in the ESP proceeding), BREDL's calculation is not based on any new information. Compare COL-ER at 3-21, 3-23 with COL ER (Rev. 0) at 3-20, 3-22. None of BREDL's assertions regarding pollutants in Lake Anna arise from the COLA Amendment, and therefore they are untimely.

3. Contention One Does Not Meet the Standards for Admissibility in 10 C.F.R. § 2.309(f)(1)

Even if Contention One were not barred by 10 C.F.R. § 52.39 as raising issues resolved in the ESP proceeding, and even if it were timely, it would still be inadmissible because it fails to meeting the pleading standards in 10 C.F.R. § 2.309(f)(1). In particular, Contention One is not supported by sufficient information demonstrating a genuine dispute with the applicant on a material issue, as required by 10 C.F.R. § 2.309(f)(1)(vi).

Foremost, BREDL does not provide any information showing that the proposed hybrid cooling system will have environmental impacts that are significant or that warrant further mitigation. While Mr. Gundersen refers to withdrawal and blowdown rates taken from the Application, neither Mr. Gundersen nor BREDL provides any discussion of how this consumptive use may affect lake level, down stream flow, terrestrial or aquatic ecosystems, recreational use, or any of the other topics that were examined in great depth in the ESP proceeding. BREDL does not provide an opinion from any biological or ecological expert addressing the significance of consumptive use; and without any threshold showing that there is some significant environmental impact warranting further mitigation, BREDL's call for dry cooling is simply unsupported.

In the same vein, neither BREDL nor Mr. Gundersen makes any effort to address the extensive analysis of these issues that Dominion and the NRC Staff have performed. There is not a single reference in Contention One or in Mr. Gundersen's Declaration to the ESP-ER where consumptive use, thermal impacts, chemicals in blowdown, cooling tower impacts such as the plume, and alternative heat dissipation systems were analyzed. See ESP-ER, §§ 5.2, 5.3, and 9.4.1. Likewise, there is not a single reference in Contention One or in Mr. Gundersen's

Declaration to the ESP-FEIS, where the NRC Staff addressed these issues. See ESP-FEIS, §§ 5.3, 5.4.1.1, 5.4.2.4 to 5.4.2.8, 8.2, and App. K. Neither Contention One nor Mr. Gundersen’s Declaration make any mention of the IFIM study that Dominion conducted or the additional lake management measures that it agreed to take to further mitigate the impact on lake level and downstream flow. BREDL does not discuss or provide any basis for disputing the NRC Staff’s conclusions that these impacts will be predominantly small. Because BREDL has not addressed and explained why it disputes the adequacy of these assessments, it has not demonstrated a genuine material dispute as required by 10 C.F.R. § 2.309(f)(vi).

Mr. Gundersen’s assertion that his review “shows that Dominion Power may not have considered the potential for a drought. . . .” (Gundersen Decl., ¶ 55) is a particularly egregious example of BREDL’s failure to make any meaningful attempt to address the prior analyses. The ESP-ER specifically evaluated the effect of Unit 3 on lake level and on downstream flow under severe drought conditions. See, e.g., ESP-ER, §§ 3.4.1.3.3, 5.2.1.2, 5.2.2. The assessment of the frequency of lowered lake levels and low downstream flow was specifically related to evaluating the effects of Unit 3 during drought conditions. Further, the assessment of alternative heat dissipation systems explicitly considered operation during drought conditions. ESP-ER at 3-9-16 to 3-9-17. The NRC’s FEIS also devoted considerable attention to drought conditions, often making separate findings concerning the magnitude of environmental impacts that might occur during drought conditions. See ESP-FEIS, §§ 2.6.1, 2.8.2.4, 3.2.2.1, 5.3, 5.3.1, 5.3.2, 5.4.1.4, 5.4.2.6, 5.4.2.8, 5.5.1.4, 5.5.3.4, 7.3, 7.5, 7.6, 7.10, 8.2.2, and App. K. BREDL’s assertion that droughts may not have been considered is a clear indication that it has made no meaningful attempt to review or address the Application.

BREDL's (and Mr. Gundersen's) references to the withdrawal and blowdown rates specified in the Application (see, e.g., Motion at 4) do not raise any genuine material dispute. Simply reciting numbers from the Application without any showing (or claim) that they are wrong, or any showing that their impacts have not been properly evaluated, does not raise any dispute with the Application.

Similarly, BREDL's reference to the Application's discussion of TBT and copper in blowdown does not demonstrate any genuine dispute with the Application on a material issue. See Motion at 5 (quoting COL-ER at 5-2). Dominion's ER explains that both of those constituents will be present in the blowdown only because they are already found in Lake Anna; their presence is unrelated to the currently operating units at North Anna Power Station, and Unit 3 would not contribute to those amounts. COL-ER at 5-2. BREDL is undoubtedly aware of these facts, because Contention One quotes that section of the COL-ER:

Both of these constituents are already present in the lake water at concentrations equal to or greater than the current VPDES water quality criteria. The presence of both of these constituents is unrelated to the operation of the existing Units 1 and 2, and Unit 3 would not contribute to the amounts already existing in the lake. Additionally the increase in concentrations of these constituents in the discharge to the WHTF attributable to the operation of Unit 3 would be essentially immeasurable using current VDEQ-approved analytical methods.

Motion at 5 (quoting COL-ER at 5-2). BREDL attempts to make an issue of Dominion's use of the word "immeasurable" to imply that Unit 3 would contribute amounts of these constituents to Lake Anna in quantities too large to measure (Motion at 5), but this is just semantics. The primary definition of "immeasurable" is "incapable of being measured,"³² which is obviously the context in which it is used in the COL-ER. As the COL-ER clearly indicates, and BREDL

³² Webster's Unabridged Dictionary (2d ed. 1998). Similarly, the Webster's New Universal Unabridged Dictionary (2d ed. 1983) gives the primary definition as "that cannot be measured," and The Oxford English Dictionary gives the primary definition as "not measurable."

quotes, Unit 3 will not contribute any of these constituents at all to Lake Anna because neither one is used by Unit 3.³³ BREDL has not shown how returning pollutants to Lake Anna that are already present there would cause any harm or impact requiring further analysis or mitigation. Thus, BREDL has raised no genuine dispute on a material issue as required by 10 C.F.R. § 2.309(f)(1)(vi), and Contention One is inadmissible.

Finally, Dominion cannot fathom what dispute BREDL intends to raise by its reference to the Coastal Zone Management Act (“CZMA”) certification. See Motion at 2-3. The COL-ER reflects the fact that the Virginia Department of Environmental Quality’s (“VDEQ”) CZMA consistency determination is a required approval, as does the COL-SEIS. See COL-ER at 1-10; COL-SEIS at 2-4 and App. D (D-21 to D-22).³⁴ Dominion submitted its CZMA to the VDEQ on September 30, 2010, with a copy provided to the NRC (ADAMS Accession No. ML1029903661).³⁵ BREDL’s reference to this consistency determination does not raise any genuine dispute with the Application.

In sum, none of the information in Contention One or in Mr. Gundersen’s Declaration demonstrates any genuine, material dispute with the Application. Even if Contention One were timely (it is not), and even if Contention One were not impermissibly seeking to revisit issues resolved in the ESP proceeding, it is still inadmissible because it is not supported by any information indicating that further mitigation of consumptive water use is warranted.

³³ BREDL seems to assume that, because these existing chemicals will become concentrated in the blowdown, they will somehow increase the concentration in the Lake, but this assumption makes no sense, and BREDL provides no support for it. Because Unit 3 will be discharging blowdown into the same volume of water in the Lake from which the quantities of TBT and copper originate, the return of these substances to the Lake cannot increase the overall concentration in the Lake.

³⁴ BREDL asserts incorrectly and without support that North Anna is within the coastal zone. See COL-SEIS at 2-4.

³⁵ Dominion has had difficulty accessing this document in ADAMS and has brought this to the Staff’s attention.

B. Contention Two is Inadmissible

Contention Two (“Unit 3 Seismic Spectra Exceedance”), which alleges that “Dominion has improperly requested a site-specific exemption from the Design Control Document Tier 1 for proposed North Anna Unit 3” (Motion at 6), is inadmissible because it impermissibly seeks to challenge the NRC’s rules. Although BREDL does not explain why the exemption is “improperly requested,” BREDL seems to be suggesting that no exemption from the Tier 1³⁶ seismic parameters may be allowed. See id. at 7 (asserting that “the minimum criteria for ground motion and certified seismic design response spectra (‘CSDRS’) specified in DCD Tier 1” must be met and that the “Commission cannot undermine key site parameters. . . .”). As discussed below, the exemption for “Seismic Spectra Exceedance” requested in the Amended Application (Amended Application, Part 7 (Departures Report) at 2-1 to 2-2) is not only permissible under the NRC regulations but is, in fact, specifically contemplated in both the US-APWR Design Control Document (“DCD”) and NRC guidance.

Contention Two is also inadmissible as failing to meet the Commission’s pleading requirements, because it is not supported by any information indicating that this exemption request fails to meet applicable standards, because it is unsupported, and because it fails to demonstrate a genuine dispute with the Amended Application on a material issue. In addition, some of BREDL’s claims in its discussion of this Contention appear to be raising issues that

³⁶ In the NRC rules certifying Standard Designs (Design Certification Rules or “DCRs”), the design certification information which is approved by the Commission is either “certified information” and is designated as “Tier 1,” or is “approved” and is designated as “Tier 2.” See 72 Fed. Reg. at 49,371. See also 10 C.F.R. Part 52, Appendices A, B, C and D, §§ II.D, II.E. The Design Control Document “DCD” for each Standard Design is divided into two parts designating the Tier 1 information and the Tier 2 information. See, e.g., <http://www.nrc.gov/reactors/new-reactors/design-cert/apwr/dcd.html>. Tier 1 information includes “significant site parameters,” which have been assumed in the Standard Design. See 10 C.F.R. Part 52, Appendices A, B, C and D, §§ II.D.4. Different changes processes apply to Tier 1 and Tier 2 information. See 10 C.F.R. Part 52, Appendices A, B, C and D, § VIII.

were resolved in the ESP proceeding and are therefore outside the scope of this proceeding.

1. Contention Two Impermissibly Challenges the Commission's Rules

To the extent that BREDL is claiming that exemptions are not permitted from DCD Tier 1 information (including the seismic parameters), the Contention impermissibly challenges the Commission's regulations and thus fails to provide a basis for an admissible contention. A petitioner is not entitled to an adjudicatory hearing to attack NRC regulations. 10 C.F.R. § 2.335; Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 N.R.C. 328, 334 (1999).

The Commission's regulations and guidance make clear that license applicants may request exemptions from DCD Tier 1 parameters. 10 C.F.R. § 52.63(b)(1) specifically states, "[a]n applicant . . . who references a design certification rule may request an exemption from one or more elements of the certification information." Similarly, 10 C.F.R. § 52.93 provides that a license applicant "may include in the application a request for an exemption from one or more of the Commission's regulations," and "[i]f the request is for an exemption from any part of a referenced design certification rule, the Commission may grant the request if it determines that the exemption complies with any exemption provisions of the referenced design certification rule, or with § 52.63 if there are no applicable exemption provisions in the referenced design certification rule." Each of the Design Certification Rules issued to date explicitly provide for exemptions from Tier 1 requirements. See 10 C.F.R. Part 52, Appendices A, B, C and D Section VIII.A.4,³⁷ see also Regulatory Guide 1.206, Combined License Applications for Nuclear Power

³⁷ Dominion "anticipate[s] that the final certification rulemaking for the US-APWR would have the same change process requirements as that in the current appendices to 10 CFR 52." Amended Application, Part 7 (Departures Report) at 1-1. The NRC's templates for Design Certification Rules contain these same provisions. Notice of

Plants (June 2007) at C.IV.3-4 (noting that an applicant or licensee may request an exemption from DCD Tier 1).

BREDL has not provided any explanation of why the exemption was allegedly “improperly requested” when the Commission’s regulations and guidance, as described above, explicitly provide for the granting of exemptions from DCD Tier 1. To the extent that the Contention is intended to assert that no exemption may be granted from DCD Tier 1 information, it is an impermissible attack on the Commission’s regulations and, as such, inadmissible.

2. There Is No Basis for BREDL’s Characterization of the Exemption Request as Improper

To the extent that BREDL may be attempting to allege that an exemption, while generally permissible, is somehow improper in this instance, its Contention is still inadmissible under 10 C.F.R. § 2.309(f)(1)(ii) because it is unsupported by any basis explaining why the exemption request is allegedly improper. Moreover, that Dominion (and presumably the Board) is left to guess why BREDL thinks the exemption is improper demonstrates on its own that this Contention is fatally vague and inadequately supported.

At the outset, BREDL provides no basis for its assertion that “the Commission cannot undermine key site parameters. . . .” Motion at 7. To the contrary, the DCD for the US-APWR specifically contemplates the potential need for departures from Tier 1 plant parameters specified therein:

An actual site for construction of a US-APWR plant will be acceptable if its characteristics fall within the design parameter values specified in Table 2.1-1 [Key Site Parameters]. In case of deviation from these parameters, justification may be provided that the proposed facility is acceptable at the proposed site.

Availability of Draft Templates for Design Certification Proposed Rules (Feb. 16, 2010) at 27-28 (ADAMS Accession No. ML100351328).

US-APWR DCD Tier 1 at 2.1-1 (emphasis added). Moreover, as discussed below, both the DCD and NRC guidance specifically contemplate the potential need for departures from the certified seismic design response spectra (“CSDRS”).

Design response spectra are used in the design of seismic Category 1 systems, structures and components (“SSCs”) and they are generally specified at the top of the ground surface in the free-field or at the top of the first layer of competent material as outcrop motion if soil layers near the surface will be completely excavated to the competent material. NUREG-0800, Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants, (“SRP”), § 3.7.1 at 3.7.1-2. For portions of a plant within a standardized design, this seismic design spectra is a postulated, site-independent value approved as part of the Design Certification, and is referred to as the CSDRS. *Id.* at 3.7.1-8; see also Final Interim Staff Guidance DC/COL-ISG-01 on Seismic Issues Associated with High Frequency Ground Motion (May 19, 2008) (“DC/COL-ISG-01”) at 4 (ADAMS Accession No. ML081330698).³⁸ When a COL applicant references a standardized design, it compares the CSDRS to its site-specific Ground Motion Response Spectra (“GMRS”)³⁹ (or to the Foundation Input Response Spectra (“FIRS”) if the GMRS needs to be translated to the base elevation of the Seismic Category 1 structures).⁴⁰ SRP, § 3.7.1 at 3.7.1-14 (paragraphs v-vi). If the CSDRS envelopes the GMRS (or FIRS, as applicable), the standard design is acceptable. *Id.* If not, a Soil-Structure Interaction (“SSI”) analysis must be performed to obtain in-structure responses in terms of floor response spectra, building member forces, and deformations in key locations. *Id.* (paragraph vii). These

³⁸ See also US-APWR DCD Tier 2 at 3.7-1 (“Certified seismic design response spectra (CSDRS) define the site-independent SSE for the seismic design of standard plant structures, and the ground motion response spectra (GMRS) define the horizontal and vertical response spectra of the site-dependent seismic motion”).

³⁹ The Safe Shutdown Earthquake (“SSE”) for the site is the GMRS. DC/COL-ISG-01 at 5.

⁴⁰ Where the COL application references an ESP, as is the case for North Anna Unit 3, the GMRS is taken from the ESP. SRP, § 3.7.1 at 3.7.1-13.

responses at the key locations are compared to the standard design in-structure responses, and if the CSDRS responses envelope the in-structure response from the FIRS, the standard design is acceptable. Id. at 3.7.1-15.

The US-APWR DCD anticipates that there will be some site-specific instances, particularly at hard-rock sites (like North Anna) where high frequency exceedances of the CSDRS will occur, and that in these cases, the COL applicant must perform an SSI analysis. US-APWR DCD Tier 2 at 3.7-3. Similarly, NRC guidance recognizes that CSDRS exceedances are expected in the high frequency range. DC/COL-ISG-01 at 7. As this guidance indicates, the NRC Staff uses the review process in Section 3.7.1 of the SRP (described above) to evaluate these exceedances. Id. This process is progressive and can stop when it is clear that the design demands resulting from the GRMS are bounded by the CSDRS design demands for SSCs. Id.

Dominion's Amended Application follows this normal, established process. As the FSAR indicates,

Unit 3 seismic category I structures are founded on rock or concrete fill on rock, and the ground motion at Unit 3 is characterized by a high frequency content. The site-specific seismic GMRS and FIRS demonstrate that there are high frequency exceedances of the CSDRS. Site-specific seismic analyses, including SSI analyses, which consider seismic wave transmission incoherence and analysis of the cumulative absolute velocity (CAV) of the seismic input motion are described in Section 3.7.2. The site-specific SSI analyses determine if high-frequency exceedances of the CSDRS could be transmitted to SSCs in the plant superstructure with potentially damaging effects.

FSAR at 3-27. As discussed in Part 7 of the Amended Application (the Departures Report),⁴¹

⁴¹ Because the CSDRS and corresponding peak ground acceleration are specified both in the Tables in both the Tier 1 and the Tier 2 portions of the US-APWR DCD, Dominion's Departures Report addresses both the standards for a departure from Tier 2 information and the standards for an exemption from DCD Tier 1 information. See Amended Application, Part 7 (Departures Report) at 1-5 to 1-8 (Departure: NAPS DEP 3.7(1) - Seismic Spectra Exceedance) and 2-1 to 2-2 (Exemption Subject: Seismic Spectra Exceedance).

[A]ppropriate site-specific analyses have been conducted to assess the subject exceedances of the DCD-specified SSE ground motion and CSDRS. Modeling and site-specific analyses of the affected standard plant structures. . . are presented in FSAR Appendix 3NN. The results in that appendix demonstrate that the standard plant seismic design of structural members envelopes the site-specific seismic responses for the affected standard plant structures.

Amended Application, Part 7 (Departures Report) at 2-1 (emphasis added).

Perhaps BREDL's vague assertion that Dominion "has improperly requested a site-specific exemption" (Motion at 6) is meant to suggest that Dominion has not met the standards for an exemption, but, if so, BREDL has failed to provide any information even remotely suggesting that the appropriate standards have not been met. BREDL does not identify any particular standard that it contends is not met, does not provide any explanation of why any such standard is not met, and does not even mention Dominion's discussion of the applicable standards in the Amended Application's Departures Report.

The Commission's regulations include specific standards to determine whether or not a requested exemption from DCD Tier 1 should be granted. These are found in 10 C.F.R. § 52.63(b)(1), which incorporates the standards in 10 C.F.R. § 52.7 directly and 10 C.F.R. § 50.12 indirectly, and which further requires consideration of whether the special circumstances that Section 52.7 requires to be present outweigh any decrease in safety that may result from the reduction in standardization caused by the exemption. Pursuant to 10 C.F.R. § 50.12(a), the Commission may, upon a showing of special circumstances, grant exemptions which are authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security. Special circumstances which may justify the granting of an exemption are present whenever application of the regulation in the particular

circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule. 10 C.F.R. § 50.12(a)(2)(ii).

Dominion's exemption request is made pursuant to these regulations and it specifically addresses their requirements. See Amended Application, Part 7 (Departures Report) at 2-2.⁴² For example, the exemption request states that the special circumstance described in 10 C.F.R. § 50.12(a)(2)(ii) is present, as the subject exceedances are due to seismic conditions existing at the Unit 3 site, and the consideration of such site-specific seismic exceedances is a recognized part of the licensing process. Id. (citing US-APWR DCD Tier 1, Section 2.1.1 at 2.1-1). Therefore, the exemption request concludes, “[c]onformance to the specific subject seismic criteria is not required to achieve the underlying purpose of the rule.” Amended Application, Part 7 (Departures Report) at 2-2.

Furthermore, BREDL's objections to the language of “undue risk” and no “significant decrease in the level of safety otherwise provided by the design” used in the request for exemption (see Motion at 8-9 and Amended Application, Part 7 (Departures Report) at 2-2) fail to recognize that this language derives from the Commission regulations which set forth the standards for the granting of Tier 1 exemptions. Compare Amended Application, Part 7 (Departures Report) at 2-2 (“the granting of the exemption will not result in a significant decrease in the level of safety otherwise provided by the design,” “will not present an undue risk to the public health and safety,” and “is consistent with the common defense and security”) with 10 C.F.R. Part 52, Appendices A, B, C and D Section VIII.A.4 (“The Commission will deny a

⁴² See also Amended Application, Part 7 (Departures Report) at 2-1 (“An *exemption* must be obtained if information proposed in the COL application is inconsistent with one or more NRC regulations. Exemptions are submitted pursuant to 10 CFR 52.7 and 52.93 and must comply with the special circumstances in 10 CFR 50.12(a) and additional considerations of 10 CFR 52.63(b)(1)”).

request for an exemption from Tier 1, if it finds that the design change will result in a significant decrease in the level of safety otherwise provided by the design”) and 10 C.F.R. § 50.12(a) (“The Commission may...grant exemptions...[which] will not present an undue risk to the public health and safety, and are consistent with the common defense and security”). The language demonstrates the request’s compliance with these regulations and does not, contrary to BREDL’s allegation, constitute any admission by Dominion “that the granting of the exception [sic] at North Anna would reduce safety and increase risk to public health.” Motion at 9. Indeed, the Amended Application contains analyses, which the Contention has not disputed, that demonstrate the exemption should be granted in accordance with the Commission’s regulatory requirements precisely because it “will not result in a significant decrease in the level of safety otherwise provided by the design.” Amended Application, Part 7 (Departures Report) at 2-2.

In sum, BREDL fails to provide any explanation of why it believes that Dominion’s exemption is improper. BREDL has not provided any basis or explanation that would even suggest that Dominion has not complied with the regulatory standards for the granting of an exemption. The Contention, therefore, fails to meet the Commission’s contention admissibility requirements in 10 C.F.R. § 2.309(f)(1)(ii).

3. Contention Two Is Impermissibly Vague

In addition to not providing an explanation of the basis for its Contention, BREDL also fails to meet the Commission’s other pleading requirements for admissible contentions. Indeed, the Contention is so vague that Dominion has had to repeatedly guess at what BREDL might intend to allege in its Contention. As described above, it is unclear why BREDL contends that the exemption request is improper, and the intermixed reference to various Commission regulations and to only two statements in the Amended Application concerning the exemption

request (see Motion at 7 & 8-9) fail to provide clear notice as to which aspect of the exemption request the Contention objects. This vagueness by itself is grounds for dismissal of the Contention. It is the responsibility of a contention's proponent to "[p]rovide a specific statement of the issue of law or fact to be raised or controverted." 10 C.F.R. § 2.309(f)(1)(i).

4. To the Extent Contention Two Intends to Allege Any Noncompliance with 10 C.F.R. § 100.23 or Regulatory Guide 1.208, It is Not Within the Scope of this Proceeding

In places, BREDL's discussion of Contention Two seems to raise issues that are not within the scope of this proceeding. Specifically, BREDL refers to a regulation and NRC guidance document that do not relate to the CSDRS and were addressed and resolved in the Early Site Permit proceeding by Dominion's performance of a probabilistic seismic hazard analysis and development of site-specific seismic response spectra.⁴³ To the extent that this discussion may be seeking to revisit matters that were resolved in that ESP proceeding, it raises issues that are not within the scope of this proceeding, contrary to the requirements of 10 C.F.R. § 2.309(f)(1)(iii).⁴⁴

The Contention first refers to 10 C.F.R. § 100.23(d)(4) and observes that it requires a license applicant to evaluate all siting factors such as the physical properties of the site, including earthquake ground motion. Motion at 7. The cited regulation, 10 C.F.R. § 100.23, provides the geologic and seismic siting criteria for a reactor site, and as such, it was expressly addressed and

⁴³ BREDL's references to the regulation and guidance document are made without any explanation to suggest that the exemption request fails to meet the standards set forth therein. Such a mere reference to documents, without any explanation of their implications or significance, does not provide an adequate basis for a contention. See Baltimore Gas & Electric Co. (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 N.R.C. 325, 348 (1998).

⁴⁴ 10 C.F.R. § 52.39(a)(2). As this Board has observed, "[m]atters resolved in a proceeding on an ESP application are considered resolved in a subsequent COL proceeding when the COL application references the ESP, subject to certain exceptions. Therefore, if an issue was resolved in the ESP proceeding and does not fall within any exception, we may not admit it in this COL proceeding." LBP-08-15, 68 N.R.C. at 304-05 (footnote omitted).

resolved in the ESP proceeding through the performance of a probabilistic seismic hazard analysis (“PSHA”) and establishment of a site-specific response spectra. Specifically, Dominion performed seismic investigations sufficient to meet the regulatory requirements and used the investigations to perform a PSHA and develop ground motion response spectra for the site. See Safety Evaluation Report for an Early Site Permit (ESP) at the North Anna ESP Site, NUREG-1835 (Sept. 2005) (“NUREG-1835”) § 2.5.2.3.4 at 2-193 to 2-197 (regarding the PSHA), § 2.5.2.3.5 at 2-197 to 2-199 (regarding compliance with 10 C.F.R. § 100.23(d)), § 2.5.2.3.6 at 2-199 to 2-201 (regarding the SSE), and § 2.5.2.4 at 2-201 to 2-202 (concluding the North Anna ESP site is acceptable and meets the requirements of 10 C.F.R. § 100.23); see also, e.g., North Anna Early Site Permit Application (Rev. 9, Sept. 2006) (ADAMS Accession No. ML062580096.), Part 2 (Site Safety Analysis Report) (“SSAR”), § 2.5.2.⁴⁵

The Contention also references Regulatory Guide 1.208, stating that it mandates that the most recent characterization of a seismic source can be the starting point for analysis of a new facility, but any new information must be evaluated and incorporated into the PSHA as appropriate based on the technical information available (Motion at 8), and noting that it stipulates that 10 CFR 100.23(d)(1) “requires that uncertainty inherent in estimates of the SSE be addressed through an appropriate analysis, such as a probabilistic seismic hazard analysis (PSHA).” Motion at 9 (citing Regulatory Guide 1.208).

⁴⁵ The only variance in the Amended Application from the GMRS spectra derived in the ESP proceeding is that the Amended Application now defines the GMRS at the hard rock horizon, rather than at the top of competent rock as in the ESP. Amended Application, Part 7 (Departures Report) at 3-4. As the Amended Application clearly states, the SSE values at the hard rock horizon in the Amended Application are the same as the ESP and Site Safety Analysis Report (“SSAR”) values at the hard rock horizon. Thus, the only variance is the change in control point. BREDL has neither addressed nor challenged this variance.

Once again, the mere reference to this regulatory guidance does not demonstrate any genuine dispute with the Amended Application and instead raises an issue that is outside the scope of this proceeding. As described above, Dominion developed a site-specific SSE ground motion and performed a PSHA in the ESP proceeding which explicitly incorporated new information as appropriate. See NUREG-1835, § 2.5.2.3.4 at 2-193 to 2-197; SSAR § 2.5.2. None of this information is discussed or disputed by the Contention.

Furthermore, Regulatory Guide 1.208, A Performance-Based Approach to Define the Site-Specific Earthquake Ground Motion (March 2007), is irrelevant because, at the time the ESP was issued, it was offered as an alternative to Regulatory Guide 1.165, Identification and Characterization of Seismic Sources and Determination of Safe Shutdown Earthquake Ground Motion (March 1997), the guidance document with which Dominion complied in performing the PSHA and developing the site-specific SSE ground motion in the ESP proceeding. See, e.g., NUREG-1835, § 2.5.2.4 at 2-201 (finding that Dominion complied with the guidance provided in Reg. Guide 1.165); SSAR at 2-1-75. To the extent that BREDL intends to assert that Dominion was required to follow the guidance provided in Regulatory Guide 1.208, rather than Regulatory Guide 1.165, it fails to demonstrate a genuine dispute with the Amended Application because, at the time the ESP was issued, the NRC's guidance made clear that the two Regulatory Guides offered alternative approaches, either of which could be chosen by an applicant.⁴⁶ See, e.g., Regulatory Guide 1.208 at 3 (“the NRC staff is providing this regulatory guide as an

⁴⁶ Regulatory Guide 1.165 was withdrawn in April 2010. See Withdrawal of Regulatory Guide, 75 Fed. Reg. 22,868 (Apr. 30, 2010). At the time of its withdrawal, however, the Early Site Permit for North Anna Unit 3 had already been issued. That Early Site Permit was issued on November 27, 2007. See ESP. The notice withdrawing Regulatory Guide 1.165 plainly states that its withdrawal would not affect any currently issued early site permits, including the one for North Anna Unit 3. See 75 Fed. Reg. at 22,868 (“The withdrawal of Regulatory Guide 1.165 does not alter the licensing basis of any currently operating reactor or any of the currently issued early site permits under 10 CFR part 52, subpart A. The siting decision is final for all licenses and early site permits that were reviewed and approved prior to this withdrawal of this guide.”).

alternative to Regulatory Guide 1.165 (Ref. 5) to satisfy, in part, the requirements of 10 CFR 100.23 and Appendix S to 10 CFR Part 50”); SRP at 2.5.1-5 to 2.5.1-6 (noting that Regulatory Guide 1.208 “offers an alternative to Regulatory Guide 1.165 for satisfying requirements of 10 CFR 100.23”). Like its mention of 10 C.F.R. § 100.23, BREDL’s reference to Regulatory Guide 1.208, to the extent that it is intended to contest the PSHA or SSE ground motion developed by Dominion, raises an issue which was addressed and resolved in the ESP proceeding and is therefore outside the scope of this proceeding, contrary to the requirements of 10 C.F.R. § 2.309(f)(1)(iii).

5. Contention Two is Unsupported

Contention Two should be rejected because BREDL does not provide a concise statement of either alleged facts or expert opinion to support its position on the issue. 10 C.F.R. § 2.309(f)(1)(v). Contention Two is not supported by any expert opinion. The Declaration of Arnold Gundersen submitted with the Motion does not address Contention Two at all. Further, none of the statements in BREDL’s discussion of Contention Two ever explain or support its assertion that Dominion’s exemption request is improper. Nor is that assertion supported by any of the references in BREDL’s discussion of this Contention (such as 10 C.F.R. § 100.23 and Reg. Guide 1.208).

6. Contention Two Fails to Demonstrate a Genuine Dispute with the Amended Application

In addition to not meeting the other contention admissibility requirements, the Contention fails to show that a genuine dispute exists with the Amended Application on a material issue of law or fact. 10 C.F.R. § 2.309(f)(1)(vi). BREDL has not met its minimum obligation to explain why it believes the exemption request to be improper nor has it addressed the Amended

Application's discussion of the exemption's compliance with the applicable regulatory requirements.

To be admissible, a contention "must explain, with specificity, particular safety or legal reasons requiring rejection of the contested [application]." Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 N.R.C. 349, 359-60 (2001). BREDL has offered nothing of the sort. In addition, analyses provided in the Amended Application (see Amended Application, Part 7 (Departures Report) at 1-5 (Departure DEP 3.7(1)) and FSAR Section 3.7) demonstrate that the exemption from the DCD Tier 1 information "will not result in a significant decrease in the level of safety otherwise provided by the design." Amended Application, Part 7 (Departures Report) at 2-2. The NRC requires that a petitioner read the pertinent portions of the license application and supporting documents, state the applicant's position, the petitioner's opposing view, and explain why it has a disagreement with the applicant. 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); Millstone, CLI-01-24, 54 N.R.C. at 358. BREDL has not come close to fulfilling that requirement here. It has failed to offer any reason to dispute the Amended Application's conclusion that the exemption would not result in a significant decrease in the level of safety otherwise provided by the design and has not demonstrated any disagreement with the supporting analyses presented in that licensing document. As a result, the Contention must be rejected since BREDL has wholly failed to "explain why the application is deficient." 54 Fed. Reg. at 33,170. See also Arizona Public Service Co. (Palo Verde Nuclear Generating Station, Unit Nos. 1, 2, and 3), CLI-91-12, 34 N.R.C. 149, 156 (1991).

In between its unexplained references to 10 C.F.R. § 100.23 and Regulatory Guide 1.208, BREDL alleges that the Amended Application “states that the proposed Unit 3 cannot not [sic] meet the standards for safe shutdown during an earthquake.” Motion at 7. As purported support for this assertion, the Contention cites to a statement in the Amended Application that “[t]he site-specific SSE peak ground acceleration (PGA) is greater than the value of 0.3g, as defined in DCD Tier 1, Table 2.1.-1,” and alleges that, “[a]ccording to Dominion, both horizontal and vertical movements would exceed the regulatory requirements of a safe-shutdown earthquake (SSE) if the Mitsubishi Heavy Industries US-APWR were to be built.” Id.

BREDL’s assertion that “regulatory requirements” of an SSE would be exceeded (and its suggestion that Dominion has so indicated) are baseless and unsupported, and thus fail to demonstrate a genuine dispute with the Amended Application. The SSE for the site is the GMRS (see note 39 supra), which was established in the ESP proceeding in accordance with the NRC regulations (such as 10 C.F.R. Part 50, Appendix S) and guidance (such as Reg. Guide 1.165). BREDL has not provided any information indicating that the SSE for the North Anna site fails to meet any regulatory requirements.

As explained in the Amended Application, Dominion has requested an exemption from DCD Tier 1 because the site-specific seismic spectra, established in the ESP proceeding, exhibit exceedances when compared to the certified seismic design response spectra, and the site-specific SSE peak ground acceleration, also established in the ESP proceeding, is greater than the value defined in DCD Tier 1. See Amended Application Part 7 (Departures Report) at 2-1. Dominion has never said that the plant would fail to “meet the standards for safe shutdown during an earthquake.” Motion at 7. In fact, as stated in the Amended Application, appropriate site-specific analyses were “conducted to assess the subject exceedances of the DCD-specified

SSE ground motion and the certified seismic design response spectra.” Amended Application Part 7 (Departures Report) at 2-1. These analyses demonstrate that the “standard plant seismic design of structural members envelopes the site-specific seismic responses for the affected standard plant structures,” and as a result, the granting of the exemption would “not result in a significant decrease in the level of safety otherwise provided by the design.” *Id.* at 2-1 to 2-2. The plant would, therefore, still be capable of safe shutdown during an earthquake, contrary to BREDL’s uncorroborated claim. BREDL has not addressed, let alone disputed, any portion of the analyses presented in the Amended Application which demonstrates that the site-specific seismic responses are enveloped by the standard plant seismic design and that the exemption would not result in a significant decrease in safety.

Similarly, the FSAR paragraph that BREDL quotes on page 8 of its Motion, concerning the In-Structure Response Spectra (“ISRS”),⁴⁷ does not raise any genuine material dispute. As a threshold matter, BREDL’s discussion is so vague that it is not clear whether BREDL has any dispute with this paragraph. Indeed, it appears that BREDL may actually be quoting this paragraph with favor to suggest that design changes are preferable to an exemption. If this is BREDL’s point, however, it simply reflects BREDL’s misunderstanding of the exemption and supporting analysis. Because the US-APWR DCD includes the CSDRS as Tier 1 information, the fact that the GMRS exceeds the CSDRS at high frequencies necessitates an exemption irrespective of whether the analysis of that exceedance results in design changes. Whether a design change is necessary depends on the evaluation of that exceedance. The paragraph that

⁴⁷ ISRS are response spectra calculated at various floors or other equipment-support locations in structures. They are used as input for seismic analysis and testing of subsystems, components and electrical and mechanical equipment that are mounted or anchored at floors or other locations in structures. *See generally* Regulatory Guide 1.122, Development of Floor Design Response Spectra for Seismic Design of Floor-Supported Equipment or Components (Feb. 1978).

BREDL quotes from Section 3.7.2.4.1 of the FSAR does no more than describe part of the process for performing this evaluation.

As previously discussed, the SSI performed by Dominion demonstrates that the “standard plant seismic design of structural members envelopes the site-specific seismic responses for the affected standard plant structures,” so there is no need for any modification to the structural design. Amended Application, Part 7 (Departures Report) at 2-1. The ISRS being discussed in the FSAR paragraph quoted by BREDL is then used to analyze the civil subsystems that may be attached to these structures, as identified in Section 3.7.3 of the DCD (such as platforms, block walls and enclosures, HVAC ducts and supports, conduits and supports, cable trays and supports, pipe racks, cabinet framing and mounts, etc.). Dominion’s FSAR does not include any departures from the design requirements or methods of analysis described in Section 3.7.3 of the DCD for these subsystems. BREDL does not indicate that it has any dispute with these design requirements or methods of analysis.

Having failed to provide any factual basis or any other support for Contention Two, BREDL goes on to describe some of what it believes to be the history of the construction of the units currently operating at North Anna, from which it concludes that “Dominion should never have received approval to build and operate the reactors at North Anna.” Motion at 9. This discussion fails to support the Contention or to demonstrate any dispute with the Amended Application because none of the purported history is related to the Amended Application or provides any factual basis for disputing the analyses provided therein with respect to Dominion’s request for an exemption from DCD Tier 1. This Board has explicitly held that a general attack on Dominion’s credibility, such as that made by BREDL here, will not give rise to an admissible Contention in this proceeding. See LBP-08-15, 68 N.R.C. at 327-28 (“To provide the basis of an

admissible contention, allegations of management improprieties or lack of integrity must be of more than historical interest. They must relate directly to the currently proposed licensing action.... BREDL has failed to establish any relationship between VEPCO's misconduct many years ago and the findings in the ESP proceeding, nor has it identified any connection between that misconduct and any other issue in the present COL proceeding") (footnotes omitted). For this and the other reasons stated above, Contention Two should be rejected as inadmissible.

IV. CONCLUSION

For the foregoing reasons, BREDL's Motion should be denied.

Respectfully Submitted,

/Signed electronically by David R. Lewis/

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Dated: October 28, 2010

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

Before the Atomic Safety and Licensing Board

In the Matter of)	
)	Docket No. 52-017-COL
Dominion Virginia Power, et al.)	
)	ASLBP No. 08-863-01-COL
North Anna Power Station, Unit 3)	

CERTIFICATE OF SERVICE

I hereby certify that Dominion's Opposition to BREDL's New Contentions, dated October 28, 2010, was provided to the Electronic Information Exchange for service to those individuals on the service list in this proceeding, this 28th day of October 2010.

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