

**UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION**

**BEFORE THE ATOMIC SAFETY AND LICENSING BOARD**

In the Matter of	)	
TENNESSEE VALLEY AUTHORITY	)	Docket Nos. 52-014 and 52-015
(Bellefonte Nuclear Power Plant,	)	
Units 3 and 4)	)	July 1, 2008
	)	

**APPLICANT'S ANSWER OPPOSING PETITION TO INTERVENE**

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## **APPLICANT’S ANSWER OPPOSING PETITION TO INTERVENE**

### **I. INTRODUCTION**

In accordance with 10 C.F.R. § 2.309(h), the Tennessee Valley Authority (“TVA” or “Applicant”), applicant in the above-captioned matter, hereby files its Answer to “Petition for Intervention and Request for Hearing by the Bellefonte Efficiency and Sustainability Team [BEST], the Blue Ridge Environmental Defense League [BREDL] and the Southern Alliance for Clean Energy [SACE]” (“Petition”) and “Supplement to Petition of June 6, 2008 Providing Alphanumeric Designation of Contentions” (“Supplemental Petition”), dated June 26, 2008.<sup>1</sup> The Petition responds to the U.S. Nuclear Regulatory Commission (“NRC” or “Commission”) “Notice of Hearing and Opportunity to Petition for Leave to Intervene on a Combined License for Bellefonte Units 3 and 4,” published in the *Federal Register* on February 8, 2008 (73 Fed. Reg. 7611) (“Hearing Notice”) concerning TVA’s application for combined licenses (“COLs”) for two AP1000 pressurized water reactors at the Bellefonte site in Jackson County, Alabama.

As discussed below, Petitioners have not satisfied the Commission’s requirements to intervene in this matter, having failed to proffer at least one admissible contention. Additionally, BEST has not demonstrated standing. Finally, the Petition was late, without any attempt to satisfy the factors governing untimely petitions to intervene. Therefore, pursuant to 10 C.F.R. § 2.309, the Petition should be denied.

### **II. BACKGROUND**

On October 30, 2007, as supplemented by letters dated November 2, 2007, January 8, 2008, and January 14, 2008, TVA submitted an application to the NRC for COLs for Bellefonte

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<sup>1</sup> The Supplemental Petition responds to the Licensing Board’s June 18, 2008 “Initial Prehearing Order.”

Nuclear Power Plant (“Bellefonte”) Units 3 and 4 (“Application” or “COL application”).<sup>2</sup> The Application was accepted for docketing on January 18, 2008, and the Hearing Notice was published on February 8, 2008.<sup>3</sup> The Hearing Notice stated that any person whose interest may be affected by this proceeding and who wishes to participate as a party must file a petition for leave to intervene within 60 days of the Hearing Notice (*i.e.*, April 8, 2008) in accordance with 10 C.F.R. § 2.309.<sup>4</sup> Subsequently, on April 7, 2008, the Commission granted a request from one of the Petitioners, BEST, for an extension of time to file petitions to intervene, and extended the period for filing petitions until June 6, 2008.<sup>5</sup> Petitioners filed the Petition on June 7, 2008 and the Supplemental Petition on June 26, 2008.

As discussed in Section III below, the Petition is untimely and should be denied for that reason alone. As discussed in Section IV below, BEST has not demonstrated standing, and therefore should not be admitted as a party to this proceeding. As discussed in Section V below, Petitioners have not submitted any admissible contentions, and therefore the Petition should be denied.

### **III. THE PETITION IS UNTIMELY**

As discussed above, the Hearing Notice for the Bellefonte COL proceeding originally specified that petitions to intervene must be filed by April 8, 2008. At the request of BEST, the Commission issued an Order on April 7, 2008 that granted an extension of time to file petitions.

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<sup>2</sup> See Notice of Receipt and Availability of Application for a Combined License, 72 Fed. Reg. 66,200 (Nov. 27, 2007). Bellefonte Units 3 and 4 are to be located on a site previously utilized for construction of Bellefonte Units 1 and 2. Final Safety Analysis Report (“FSAR”) § 1.1.1. Construction was halted prior to the completion of Bellefonte Units 1 and 2. *Id.*

<sup>3</sup> Acceptance for Docketing of an Application for Combined License for Bellefonte Units 3 and 4, 73 Fed. Reg. 4923 (Jan. 28, 2008); Hearing Notice, 73 Fed. Reg. at 7611.

<sup>4</sup> Hearing Notice, 73 Fed. Reg. at 7613.

<sup>5</sup> Notice of Extension of Time for Petition for Leave to Intervene on a Combined License Application for Bellefonte Units 3 and 4, 73 Fed. Reg. 19,904 (Apr. 11, 2008).

The Order stated that the extension was “for a period of 60 days from the date of this Order,” *i.e.*, June 6, 2008.<sup>6</sup> According to the notices issued by the NRC’s Electronic Information Exchange (“EIE”), the Petition arrived at NRC on June 7, 2008.<sup>7</sup> Thus, the Petition was submitted one day late.<sup>8</sup>

The Petition does not offer any explanation for the untimely filing. Furthermore, the Petition does not address any of the factors specified in 10 C.F.R. § 2.309(c) governing untimely petitions to intervene. A petitioner has the burden of demonstrating that its untimely petition should be admitted based upon the factors in 10 C.F.R. § 2.309(c), and a late petition that fails to address those factors may be summarily rejected.<sup>9</sup> Given that Petitioners were previously granted a 60-day extension of time, their failure to submit a timely petition or to address any of the factors listed in 10 C.F.R. § 2.309(c) should be held strictly against them. Accordingly, the Petition should be denied for failure to satisfy the Commission’s regulations governing timely filings.<sup>10</sup>

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<sup>6</sup> *Id.*

<sup>7</sup> The Petition and its attachments apparently were submitted in two parts. According to the EIE notices, each part arrived at the EIE on June 7, 2008. The EIE notices state that the first part arrived at 00:07:28 on June 7, 2008 and the second part arrived at 00:55:40 on June 7, 2008. As provided in 10 C.F.R. § 2.302, the “entire” filing must be completed within the specified period. Additionally, 10 C.F.R. § 2.306(c) states: “To be considered timely, a document must be served: . . . By 11:59 p.m. Eastern Time for a document served by the E-Filing system.”

<sup>8</sup> The Petition itself and the Certificate of Service are dated June 6, 2008. However, this date is belied by the NRC’s EIE notices.

<sup>9</sup> *Boston Edison Co.* (Pilgrim Nuclear Power Station), ALAB-816, 22 NRC 461, 465-68 (1985); *see also Tex. Utils. Elec. Co.* (Comanche Peak Steam Electric Station, Unit 2), CLI-93-1, 37 NRC 1, 3-4 (1993); *Tex. Utils. Elec. Co.* (Comanche Peak Steam Electric Station, Unit 2), CLI-93-11, 37 NRC 251, 255 (1993).

<sup>10</sup> TVA also notes that the form of the Petition submitted on June 7, 2008 did not conform to the NRC’s criteria for electronic submittals, and that the Petition did not include a signature page for the Certificate of Service. *See* E-mail from E. Julian, NRC, to L. Zeller, BREDL, FW: 2 BREDL submissions (June 9, 2008). According to the EIE, Petitioners did not correct these deficiencies until June 11, 2008.

#### IV. BEST HAS NOT DEMONSTRATED STANDING

To be admitted as a party to this proceeding, Petitioners must demonstrate standing and submit at least one admissible contention.<sup>11</sup> The Applicant does not object to BREDL's and SACE's standing, but does object to BEST's standing.<sup>12</sup>

As Petitioners state, “[a]n organization that wishes to intervene in a proceeding may do so either in its own right by demonstrating harm to its organizational interests, or in a representational capacity by demonstrating harm to its members.”<sup>13</sup> BEST has not presented any discussion of harm to its organizational interests. As Petitioners admit, “[t]o intervene in a representational capacity, an organization must show not only that at least one of its members would fulfill the standing requirements, but also that he or she has authorized the organization to represent his or her interests.”<sup>14</sup>

Although the Petition indicates that certain individuals provide declarations supporting BEST's standing, this is incorrect.<sup>15</sup> None of the declarations provided with the Petition authorizes BEST to represent the declarants' interests; instead, the declarations only reference BREDL or SACE. Indeed, none of the declarations indicates that any of the declarants are members of BEST. The Commission has held that at least one member of an organization must

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<sup>11</sup> See 10 C.F.R. § 2.309(a).

<sup>12</sup> Although TVA does not object to BREDL's and SACE's standing, TVA notes that some of the declarations attached to the Petition are not sufficient to establish standing because the declarant does not reside within 50 miles of Bellefonte or the declaration is otherwise defective. See, e.g., *Fla. Power & Light Co.* (St. Lucie Nuclear Power Plant, Units 1 & 2), CLI-89-21, 30 NRC 325, 329-30 (1989).

<sup>13</sup> Petition at 4 (citing *Hydro Res., Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), LBP-98-9, 47 NRC 261, 271 (1998)); see also *Phila. Elec. Co.* (Limerick Generating Station, Units 1 and 2), LBP-82-43A, 15 NRC 1423, 1437 (1982) (citing *Warth v. Seldin*, 422 U.S. 490, 511 (1975)).

<sup>14</sup> Petition at 4 (citing *Private Fuel Storage, L.L.C.* (Independent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 168 (1998), *aff'd on other grounds*, CLI-98-13, 48 NRC 26 (1998)); see also *N. States Power Co.* (Monticello Nuclear Generating Plant), CLI-00-14, 52 NRC 37, 47 (2000); *GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-06, 51 NRC 193, 202 (2000).

<sup>15</sup> Petition at 4-5.

authorize the organization to represent that member's interest; BEST has not demonstrated this.<sup>16</sup> BEST's attempt to rely on members of BREDL is misplaced, because each entity seeking to become a party must meet the standing requirements.<sup>17</sup> BEST has not demonstrated standing, and should not be a party to this proceeding.

**V. PETITIONERS HAVE NOT PROFFERED AN ADMISSIBLE CONTENTION**

**A. Applicable Legal Standards and Relevant NRC Precedent**

As explained above, to intervene in an NRC licensing proceeding, a petitioner must proffer at least one admissible contention.<sup>18</sup> Under 10 C.F.R. § 2.309(f)(1), a hearing request “must set forth with particularity the contentions sought to be raised.” In addition to this requirement, 10 C.F.R. § 2.309(f)(1) specifies that each contention must: (1) provide a specific statement of the legal or factual issue sought to be raised; (2) provide a brief explanation of the basis for the contention; (3) demonstrate that the issue raised is within the scope of the proceeding; (4) demonstrate that the issue raised is material to the findings the NRC must make to support the action that is involved in the proceeding; (5) provide a concise statement of the alleged facts or expert opinions, including references to specific sources and documents that support the petitioner's position and upon which the petitioner intends to rely; and (6) provide sufficient information to show that a genuine dispute exists with regard to a material issue of law or fact.<sup>19</sup>

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<sup>16</sup> See *Private Fuel Storage, L.L.C.* (Independent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 323 (1999).

<sup>17</sup> See 10 C.F.R. § 2.309; *Commonwealth Edison Co.* (Dresden Nuclear Power Station, Unit 1), CLI-81-25, 14 NRC 616, 623 (1981); see also *Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), ALAB-952, 33 NRC 521, 530-31 (stating that representational standing does not exist when the individual relied upon is not an organization member, but only a representative of another organization), *aff'd*, CLI-91-13, 34 NRC 185 (1991).

<sup>18</sup> See 10 C.F.R. § 2.309(a).

<sup>19</sup> See *id.* § 2.309(f)(1)(i)-(vi). The seventh contention admissibility requirement—10 C.F.R. § 2.309(f)(1)(vii)—is only applicable in proceedings arising under 10 C.F.R. § 52.103(b), and therefore has no bearing on the admissibility of the Petitioners' contentions in this proceeding.

The NRC will deny a petition to intervene and request for hearing from a petitioner who has standing but has not proffered at least one admissible contention.<sup>20</sup> The purpose of these six criteria is to “focus litigation on concrete issues and result in a clearer and more focused record for decision.”<sup>21</sup> The Commission has stated that it “should not have to expend resources to support the hearing process unless there is an issue that is appropriate for, and susceptible to, resolution in an NRC hearing.”<sup>22</sup> This results in contention admissibility criteria that are “strict by design” and were “toughened . . . in 1989 because in prior years ‘licensing boards had admitted and litigated numerous contentions that appeared to be based on little more than speculation.’”<sup>23</sup> Failure to comply with any one of the six admissibility criteria is grounds for rejecting a proposed contention.<sup>24</sup>

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

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

A petitioner must provide “a specific statement of the issue of law or fact to be raised or controverted.”<sup>25</sup> The petitioner must “articulate at the outset the specific issues [it] wish[es] to litigate as a prerequisite to gaining formal admission as [a party].”<sup>26</sup> Namely, an “admissible contention must explain, with specificity, particular safety or legal reasons requiring rejection of

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<sup>20</sup> *Fla. Power & Light Co.* (Turkey Point Nuclear Power Plant, Units 3 & 4), CLI-01-17, 54 NRC 3, 26 (2001).

<sup>21</sup> Final Rule, Changes to Adjudicatory Process, 69 Fed. Reg. 2182, 2202 (Jan. 14, 2004).

<sup>22</sup> *Id.*

<sup>23</sup> *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 & 3), CLI-01-24, 54 NRC 349, 358 (2001) (citing *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, & 3), CLI-99-11, 49 NRC 328, 334 (1999)).

<sup>24</sup> See Final Rule, Changes to Adjudicatory Process, 69 Fed. Reg. at 2221; see also *Private Fuel Storage*, CLI-99-10, 49 NRC at 325.

<sup>25</sup> 10 C.F.R. § 2.309(f)(1)(i).

<sup>26</sup> *Oconee*, CLI-99-11, 49 NRC at 338.

the contested [application].”<sup>27</sup> The contention rules “bar contentions where petitioners have only ‘what amounts to generalized suspicions, hoping to substantiate them later.’”<sup>28</sup>

## **2. Petitioners Must Briefly Explain the Basis for the Contention**

A petitioner must provide “a brief explanation of the basis for the contention.”<sup>29</sup> This includes “sufficient foundation” to “warrant further exploration.”<sup>30</sup> The petitioner’s explanation serves to define the scope of a contention, as “[t]he reach of a contention necessarily hinges upon its terms coupled with its stated bases.”<sup>31</sup> The Board, however, must determine the admissibility of the contention itself, not the admissibility of individual “bases.”<sup>32</sup>

As the Commission has observed, “[i]t is the responsibility of the Petitioner to provide the necessary information to satisfy the basis requirement for the admission of its contentions and demonstrate that a genuine dispute exists within the scope of this proceeding.”<sup>33</sup> In other words, “[a] contention’s proponent, not the licensing board, is responsible for formulating the contention and providing the necessary information to satisfy the basis requirement for the admission of contentions.”<sup>34</sup>

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<sup>27</sup> *Millstone*, CLI-01-24, 54 NRC at 359-60.

<sup>28</sup> *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 & 2), CLI-03-17, 58 NRC 419, 424 (2003) (quoting *Oconee*, CLI-99-11, 49 NRC at 337-39).

<sup>29</sup> 10 C.F.R. § 2.309(f)(1)(ii); *see* Final Rule, Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, 54 Fed. Reg. 33,168, 33,170 (Aug. 11, 1989).

<sup>30</sup> *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 & 2), ALAB-942, 32 NRC 395, 428 (1990) (citation omitted).

<sup>31</sup> *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 & 2), ALAB-899, 28 NRC 93, 97 (1988), *aff’d sub nom.*, *Massachusetts v. NRC*, 924 F.2d 311 (D.C. Cir. 1991) (citation omitted).

<sup>32</sup> *See La. Energy Servs., L.P.* (National Enrichment Facility), LBP-04-14, 60 NRC 40, 57 (2004) (“licensing boards generally are to litigate ‘contentions’ rather than ‘bases’”) (citation omitted).

<sup>33</sup> *Balt. Gas & Elec. Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 & 2), CLI-98-14, 48 NRC 39, 41 (1998).

<sup>34</sup> *Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18, 22 (1998).

### 3. Contentions Must Be Within the Scope of the Proceeding

A petitioner must demonstrate “that the issue raised in the contention is within the scope of the proceeding.”<sup>35</sup> The scope of the proceeding is defined by the Commission’s notice of opportunity for a hearing.<sup>36</sup> Moreover, contentions are necessarily limited to issues that are germane to the specific application pending before the licensing board.<sup>37</sup> Any contention that falls outside the specified scope of the proceeding must be rejected.<sup>38</sup>

A contention that challenges an NRC rule is outside the scope of the proceeding because, absent a waiver,<sup>39</sup> “no rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding.”<sup>40</sup> Furthermore, a contention that raises a matter that is, or is about to become, the subject of a rulemaking, is also outside the scope of this proceeding.<sup>41</sup> This includes contentions that advocate stricter requirements than agency rules impose or that otherwise seek to litigate a generic determination established by a Commission rulemaking.<sup>42</sup>

Similarly, any contention that collaterally attacks applicable statutory requirements or the basic structure of the NRC regulatory process must be rejected by the Board as outside the scope

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<sup>35</sup> 10 C.F.R. § 2.309(f)(1)(iii).

<sup>36</sup> See *Duke Power Co.* (Catawba Nuclear Station, Units 1 & 2), ALAB-825, 22 NRC 785, 790-91 (1985).

<sup>37</sup> See *Yankee Atomic Elec. Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 204 (1998).

<sup>38</sup> See *Portland Gen. Elec. Co.* (Trojan Nuclear Plant), ALAB-534, 9 NRC 287, 289 n.6 (1979).

<sup>39</sup> The specific requirements for waiver addressed in 10 C.F.R. § 2.335 are discussed in Section V.A.7, *infra*.

<sup>40</sup> See 10 C.F.R. § 2.335(a).

<sup>41</sup> See *Oconee*, CLI-99-11, 49 NRC at 345 (citing *Potomac Elec. Power Co.* (Douglas Point Nuclear Generating Station, Units 1 & 2), ALAB-218, 8 AEC 79, 85 (1974)); see also Final Policy Statement, Conduct of New Reactor Licensing Proceedings, 73 Fed. Reg. 20,963, 20,972 (Apr. 17, 2008) (“New Reactor Policy Statement”).

<sup>42</sup> See *Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 & 4), LBP-01-6, 53 NRC 138, 159, *aff’d*, CLI-01-17, 54 NRC 3 (2001).

of the proceeding.<sup>43</sup> Accordingly, a contention that simply states the petitioner's views about what regulatory policy should be does not present a litigable issue.<sup>44</sup>

When an applicant references a standard design certification, Commission regulations limit the scope of a COL proceeding as follows:

Except as provided in 10 CFR 2.335, in making the findings required for issuance of a combined license . . . , the Commission shall treat as resolved those matters resolved in connection with the issuance or renewal of a design certification rule.<sup>45</sup>

Appendix D to 10 C.F.R. Part 52 specifies what matters are considered to be resolved in a COL proceeding that references the AP1000 standard design certification. Issues that are considered to be resolved include all nuclear safety issues associated with the design information in the AP1000 Design Control Document ("DCD").<sup>46</sup> Thus, any challenges to the AP1000 design are outside the scope of this proceeding.<sup>47</sup>

Furthermore, challenges to the NRC staff's safety review are outside the scope of this proceeding:

The adequacy of the applicant's license application, not the NRC staff's safety evaluation, is the safety issue in any licensing proceeding, and under longstanding decisions of the agency,

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<sup>43</sup> *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Unit 1), LBP-07-11, 65 NRC 41, 57-58 (2007) (citing *Phila. Elec. Co.* (Peach Bottom Atomic Power Station, Units 2 & 3), ALAB-216, 8 AEC 13, 20 (1974)).

<sup>44</sup> *See Peach Bottom*, ALAB-216, 8 AEC at 20-21. Within the adjudicatory context, however, a petitioner may submit a request for waiver of a rule under 10 C.F.R. § 2.335(b), as discussed in Section V.A.7, *infra*. Conversely, outside the adjudicatory context, a petitioner may file a petition for rulemaking under 10 C.F.R. § 2.802 or request that the NRC staff take enforcement action under 10 C.F.R. § 2.206.

<sup>45</sup> 10 C.F.R. § 52.63(a)(5); *see also id.* § 52.83(a).

<sup>46</sup> *Id.*, Part 52, App. D, § VI.B. The AP1000 DCD is incorporated by reference into the AP1000 design certification rule. *See id.*, Part 52, App. D, § III.A. The DCD generally follows the format of a FSAR, but is separated into two major divisions of design-related information: Tier 1 and Tier 2.

<sup>47</sup> *See id.* § 52.63(a)(5).

contentions on the adequacy of the [content of the] SER are not cognizable in a proceeding.<sup>48</sup>

#### **4. Contentions Must Raise a Material Issue**

A petitioner must demonstrate “that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding.”<sup>49</sup> The standards defining the findings that the NRC must make to support issuance of a COL in this proceeding are set forth in 10 C.F.R. §§ 51.107 and 52.97. As the Commission has observed, “[t]he dispute at issue is ‘material’ if its resolution would ‘make a difference in the outcome of the licensing proceeding.’”<sup>50</sup> In this regard, each contention must be one that, if proven, would entitle the petitioner to relief.<sup>51</sup> Additionally, contentions alleging an error or omission in an application must establish some significant link between the claimed deficiency and protection of the health and safety of the public or the environment.<sup>52</sup>

#### **5. Contentions Must Be Supported by Adequate Factual Information or Expert Opinion**

A petitioner bears the burden to present the factual information or expert opinions necessary to support its contention adequately, and failure to do so requires the Board to reject the contention.<sup>53</sup> The petitioner’s obligation in this regard has been described as follows:

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<sup>48</sup> Final Rule, Changes to the Adjudicatory Process, 69 Fed. Reg. at 2202 (citations omitted). Although the adequacy of the NRC staff’s environmental review may be within the scope of this proceeding, a petitioner is initially required to base its environmental contentions on the applicant’s Environmental Report (“ER”). *See* 10 C.F.R. § 2.309(f)(2).

<sup>49</sup> *Id.* § 2.309(f)(1)(iv).

<sup>50</sup> *Oconee*, CLI-99-11, 49 NRC at 333-34 (citing Final Rule, Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, 54 Fed. Reg. at 33,172).

<sup>51</sup> *See Duke Energy Corp.* (McGuire Nuclear Station, Units 1 & 2), CLI-02-26, 56 NRC 358, 363 n.10 (2002).

<sup>52</sup> *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 & 3), LBP-04-15, 60 NRC 81, 89, *aff’d*, CLI-04-36, 60 NRC 631 (2004).

<sup>53</sup> *See* 10 C.F.R. § 2.309(f)(1)(v); *Yankee Atomic Elec. Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 262 (1996).

[A]n intervention petitioner has an *ironclad obligation* to examine the *publicly available documentary material pertaining to the facility in question* with sufficient care to enable [the petitioner] to uncover any information that could serve as the foundation for a specific contention. Stated otherwise, neither Section 189a. of the Act nor Section [2.309] of the Rules of Practice permits the filing of a vague, unparticularized contention, followed by an endeavor to flesh it out through discovery against the applicant or staff.<sup>54</sup>

Where a petitioner neglects to provide the requisite support for its contentions, the Board may not make assumptions of fact that favor the petitioner or supply information that is lacking.<sup>55</sup> The petitioner must explain the significance of any factual information upon which it relies.<sup>56</sup>

With respect to factual information or expert opinion proffered in support of a contention, “the Board is not to accept uncritically the assertion that a document or other factual information or an expert opinion supplies the basis for a contention.”<sup>57</sup> Any supporting material provided by a petitioner, including those portions thereof not relied upon, is subject to Board scrutiny, “both for what it does and does not show.”<sup>58</sup> The Board will examine documents to confirm that they support the proposed contentions.<sup>59</sup> A petitioner’s imprecise reading of a document cannot be the basis for a litigable contention.<sup>60</sup> Moreover, vague references to documents do not suffice—

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<sup>54</sup> *Duke Power Co.* (Catawba Nuclear Station, Units 1 & 2), ALAB-687, 16 NRC 460, 468 (1982), *vacated in part on other grounds*, CLI-83-19, 17 NRC 1041 (1983) (emphasis added).

<sup>55</sup> *See Ariz. Pub. Serv. Co.* (Palo Verde Nuclear Station, Units 1, 2, & 3), CLI-91-12, 34 NRC 149, 155 (1991).

<sup>56</sup> *See Fansteel, Inc.* (Muskogee, Oklahoma, Site), CLI-03-13, 58 NRC 195, 204-05 (2003).

<sup>57</sup> *Private Fuel Storage*, LBP-98-7, 47 NRC at 181.

<sup>58</sup> *See Yankee Atomic Elec. Co.* (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 90 (1996), *rev’d in part on other grounds*, CLI-96-7, 43 NRC 235 (1996).

<sup>59</sup> *See Vt. Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 48 (1989), *vacated in part on other grounds and remanded*, CLI-90-4, 31 NRC 333 (1990).

<sup>60</sup> *See Ga. Inst. of Tech.* (Georgia Tech Research Reactor, Atlanta, Ga.), LBP-95-6, 41 NRC 281, 300 (1995).

the petitioner must identify specific portions of the documents on which it relies.<sup>61</sup> The mere incorporation of massive documents by reference is similarly unacceptable.<sup>62</sup>

In addition, “an expert opinion that merely states a conclusion (*e.g.*, the application is ‘deficient,’ ‘inadequate,’ or ‘wrong’) without providing *a reasoned basis or explanation* for that conclusion is inadequate because it deprives the Board of the ability to make the necessary, reflective assessment of the opinion” as it is alleged to provide a basis for the contention.<sup>63</sup> Conclusory statements cannot provide “sufficient” support for a contention, simply because they are made by an expert.<sup>64</sup> In short, a contention “will be ruled inadmissible if the petitioner ‘has offered no tangible information, no experts, no substantive affidavits,’ but instead only ‘bare assertions and speculation.’”<sup>65</sup>

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

With regard to the requirement that a petitioner “provide sufficient information to show . . . a genuine dispute . . . with the applicant . . . on a material issue of law or fact,”<sup>66</sup> the Commission has stated that the petitioner must “read the pertinent portions of the license application . . . [and] state the applicant’s position and the petitioner’s opposing view,” and explain why it disagrees with the applicant.<sup>67</sup> If a petitioner believes the license application fails to adequately address a relevant issue, then the petitioner is to “explain why the application is

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<sup>61</sup> *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 & 2), CLI-89-03, 29 NRC 234, 240-41 (1989).

<sup>62</sup> *Id.*; *see also TVA* (Browns Ferry Nuclear Plant, Units 1 & 2), LBP-76-10, 3 NRC 209, 216 (1976).

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

<sup>64</sup> *See USEC*, CLI-06-10, 63 NRC at 472.

<sup>65</sup> *Fansteel*, CLI-03-13, 58 NRC at 203 (quoting *GPU Nuclear* (Oyster Creek Nuclear Generating Station), CLI-00-06, 51 NRC 193, 208 (2000)).

<sup>66</sup> 10 C.F.R. § 2.309(f)(1)(vi).

<sup>67</sup> Final Rule, Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, 54 Fed. Reg. at 33,170; *see also Millstone*, CLI-01-24, 54 NRC at 358.

deficient.”<sup>68</sup> A contention that does not directly controvert a position taken by the applicant in the application is subject to dismissal.<sup>69</sup> Similarly, a petitioner’s oversight or mathematical error does not raise a genuine issue. For example, if a petitioner submits a contention of omission, but the allegedly missing information is indeed in the license application, then the contention does not raise a genuine issue. An allegation that some aspect of a license application is “inadequate” or “unacceptable” does not give rise to a genuine dispute unless it is supported by facts and a reasoned statement of why the application is unacceptable in some material respect.<sup>70</sup>

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

As discussed above, a contention that challenges an NRC rule is outside the scope of the proceeding because, absent a waiver, “no rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding.”<sup>71</sup> In order to seek waiver of a rule in a particular adjudicatory proceeding, a petitioner must submit a petition pursuant to 10 C.F.R. § 2.335. The requirements for a Section 2.335 petition are as follows:

The sole ground for petition of waiver or exception is that special circumstances with respect to the subject matter of the particular proceeding are such that the application of the rule or regulation (or provision of it) would not serve the purposes for which the rule or regulation was adopted.<sup>72</sup>

Further, such a petition

*must be accompanied by an affidavit* that identifies the specific aspect or aspects of the subject matter of the proceeding as to which the application of the rule or regulation (or provision of it)

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<sup>68</sup> Final Rule, Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, 54 Fed. Reg. at 33,170; *see also Palo Verde*, CLI-91-12, 34 NRC at 156.

<sup>69</sup> *See Tex. Utils. Elec. Co.* (Comanche Peak Steam Electric Station, Unit 2), LBP-92-37, 36 NRC 370, 384 (1992), *vacated as moot*, CLI-93-10, 37 NRC 192 (1993).

<sup>70</sup> *See Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 & 4), LBP-90-16, 31 NRC 509, 521, 521 n.12 (1990).

<sup>71</sup> *See* 10 C.F.R. § 2.335(a).

<sup>72</sup> *Id.* § 2.335(b).

would not serve the purposes for which the rule or regulation was adopted. *The affidavit must state with particularity the special circumstances alleged to justify the waiver or exception requested.*<sup>73</sup>

In accordance with NRC precedent, a Section 2.335 petition “can be granted only in unusual and compelling circumstances.”<sup>74</sup> The Commission’s *Millstone* decision states the test for Section 2.335 petitions, under which the petitioner must demonstrate that it satisfies each of the following four criteria: (1) the rule’s strict application “would not serve the purposes for which [it] was adopted”; (2) the movant has alleged “special circumstances” that were “not considered, either explicitly or by necessary implication, in the rulemaking proceeding leading to the rule sought to be waived”; (3) those circumstances are “unique” to the facility rather than “common to a large class of facilities”; and (4) a waiver of the regulation is necessary to reach a “significant safety problem.”<sup>75</sup> If the petitioner makes the required prima facie showing, then the licensing board must certify the matter to the Commission.<sup>76</sup> However, if the petitioner fails to satisfy any of the factors of the four-part test required for making a prima facie showing, then the matter may not be litigated, and “the presiding officer may not further consider the matter.”<sup>77</sup>

## **B. Petitioners’ Proposed Contentions Are Inadmissible**

The following sections evaluate each of Petitioners’ proposed contentions against the standards outlined above. As the following discussion demonstrates, each of the Petitioners’

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<sup>73</sup> *Id.* (emphasis added).

<sup>74</sup> *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 and 2), ALAB-895, 28 NRC 7, 16 (1988), *aff’d*, CLI-88-10, 28 NRC 573, 597 (1988), *recons. denied*, CLI-89-03, 29 NRC 234 (1989).

<sup>75</sup> *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 & 3), CLI-05-24, 62 NRC 551, 559-60 (2005) (citing *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 & 2), CLI-89-20, 30 NRC 231, 235 (1989); *Seabrook*, CLI-88-10, 28 NRC at 597).

<sup>76</sup> See 10 C.F.R. § 2.335(c) and (d).

<sup>77</sup> See *id.* § 2.335(c); see also *Millstone*, CLI-05-24, 62 NRC at 560 (“The use of ‘and’ in this list of requirements is both intentional and significant. For a waiver request to be granted, *all four* factors must be met.”) (citations omitted).

contentions is deficient with respect to one or more of those standards. As a result, the Petition should be denied for failure to proffer an admissible contention.<sup>78</sup>

**1. Contention MISC-A (Former Contention 1) - - Criticisms of the NRC Staff**

This contention alleges that Bellefonte will not improve the “General Welfare.”<sup>79</sup> The bases for former Contention 1 also identify concerns about (1) NRC’s ability to identify hardware failures,<sup>80</sup> (2) human factors engineering for the AP1000 design,<sup>81</sup> (3) the independence of NRC’s review,<sup>82</sup> and (4) NRC “procedural shell games.”<sup>83</sup> Petitioners’ Supplemental Petition designates each of these four bases as new contentions (FSAR-A, TS-A, A/FI-A, and MISC-A1).<sup>84</sup> TVA addresses the general contention first, followed by a discussion of each of the four bases that have been redesignated as contentions.

**a. Contention MISC-A - - General Welfare, Standard of Living, and Free Competition**

Petitioners claim that granting COLs for Bellefonte would not improve the general welfare, increase the standard of living, or strengthen free competition per 42 U.S.C. § 2011.<sup>85</sup> However, that section of the Atomic Energy Act (“AEA”) merely provides the general policy for use of nuclear power in the United States. It does not provide the standards for issuance of a

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<sup>78</sup> Although inconsequential to this proceeding, Petitioners’ claim that “TVA has made it exceedingly difficult for the public to read and understand [the COL application] without expensive and advanced computer technology” is entirely without merit. Petition at 8. The only technology needed to view the Application is an Internet connection and the capability to view pdf documents. Additionally, a hard copy of the Application may be obtained through the NRC. See Hearing Notice, 73 Fed. Reg. at 7613.

<sup>79</sup> Petition at 11-12.

<sup>80</sup> *Id.* at 12-14.

<sup>81</sup> *Id.* at 14-15.

<sup>82</sup> *Id.* at 15-16.

<sup>83</sup> *Id.* at 16-19.

<sup>84</sup> Supplemental Petition at 3.

<sup>85</sup> Petition at 11-12.

license for a nuclear power reactor. Instead, Section 103 of the AEA, 42 U.S.C. § 2133, provides the standards for issuance of a license, and those standards are focused on safety and security and do not include improving the general welfare, increasing the standard of living, or strengthening of free competition. Similarly, NRC regulations implementing the AEA do not require that an applicant address whether the issuance of a COL will improve the general welfare, increase the standard of living, or strengthen free competition in private enterprise.<sup>86</sup> Nor is the NRC required to make such a finding prior to granting a COL.<sup>87</sup> Accordingly, these matters are outside the scope of this proceeding and are not material to the findings that the NRC must make to support issuance of the COLs, and therefore Contention MISC-A does not comply with 10 C.F.R. § 2.309(f)(1)(iii) and (iv).<sup>88</sup>

**b. Contention FSAR-A - - Hardware Failures**

Petitioners argue that the NRC has not enforced its regulations, as indicated by the events associated with the reactor vessel head at Davis-Besse in 2002 and NRC testing of fire barriers.<sup>89</sup> Petitioners also imply that the NRC's oversight of Bellefonte (including the Bellefonte corrective action program) will be inadequate.<sup>90</sup>

The Petition does not identify or allege that there are any hardware deficiencies at Bellefonte or any deficiencies in the Bellefonte corrective action program. Contention FSAR-A does not mention the Bellefonte FSAR, let alone identify a genuine dispute of material fact

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<sup>86</sup> See 10 C.F.R. §§ 52.77 - 52.80.

<sup>87</sup> See *id.* § 52.97.

<sup>88</sup> Additionally, Contention MISC-A does not even mention the Bellefonte Application, let alone identify a genuine dispute of material fact regarding the Application. Furthermore, Contention MISC-A does not provide any facts to support its claim that Bellefonte will not improve the general welfare, increase the standard of living, or strengthen free competition. Therefore, the contention does not comply with 10 C.F.R. § 2.309(f)(1)(iv), (v), and (vi).

<sup>89</sup> Petition at 12-14.

<sup>90</sup> *Id.*

regarding the FSAR. Therefore, the contention does not comply with 10 C.F.R. § 2.309(f)(1)(v) and (vi).<sup>91</sup>

Contention FSAR-A appears to be focused upon NRC's overall capability for detecting hardware failures and deficiencies in corrective action programs. The Commission has repeatedly stated that the adequacy of a license application, not the NRC staff's evaluation, is the pertinent safety issue in any licensing proceeding.<sup>92</sup> Similarly, NRC precedent makes clear that an adjudicatory proceeding is not the appropriate forum for Petitioners to state their views about NRC policy.<sup>93</sup> Therefore, Contention FSAR-A fails to present a litigable issue within the scope of this proceeding and does not comply with 10 C.F.R. § 2.309(f)(1)(iii) and (iv).

**c. Contention TS-A - - Human Factors**

Contention TS-A argues that operator errors occur, that the AP1000 has not been tested in the real world, and that the NRC is obligated to demonstrate how it will prevent human errors at the proposed facility.<sup>94</sup>

Petitioners' claims regarding the human factors analysis for the AP1000 fail to raise any issue within the scope of this proceeding. Human factors engineering for the AP1000 design is addressed in Section 3.2 of Tier 1 and Chapter 18 of Tier 2 in the AP1000 DCD. In accordance

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<sup>91</sup> Petitioners refer to alleged deficiencies in NRC's enforcement action at Davis-Besse and with fire protection requirements. *Id.* However, the Petitioners fail to provide any link between the NRC's enforcement action involving Davis-Besse or the historical implementation of fire protection requirements, and the Bellefonte COL application. Although the Petition mentions the TVA corrective action plan and quality assurance program, it fails to describe any alleged deficiency in either program. *Id.* at 14. This failure to reference specific portions of the Bellefonte Application that the Petitioners dispute provides an additional reason to reject this contention under 10 C.F.R. § 2.309(f)(1)(vi).

<sup>92</sup> See Final Rule, Changes to the Adjudicatory Process, 69 Fed. Reg. at 2202; see also *Vt. Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), CLI-00-20, 52 NRC 151, 170-71 (2000) (rejecting a contention regarding the performance of the NRC staff in overseeing the plant).

<sup>93</sup> See *PPL Susquehanna* (Susquehanna Steam Electric Station, Units 1 and 2), LBP-07-10, 66 NRC 1, 22-23 (2007); *S. Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 252-53 (2007); *Peach Bottom*, ALAB-216, 8 AEC at 20-21 & n.33; see also *Andrew Siemaszko*, CLI-06-16, 63 NRC 708, 720 (2006).

<sup>94</sup> Petition at 14-15.

with 10 C.F.R. § 52.63(a)(5) and Section VI of Appendix D of 10 C.F.R. Part 52, those issues are considered resolved and, therefore, any challenge to this information is outside the scope of this proceeding.<sup>95</sup>

In addition, Petitioners fail to provide sufficient information to show a genuine dispute on a material issue of law or fact as they fail to reference the specific portions of the Bellefonte Application addressing human factors that Petitioners dispute, contrary to 10 C.F.R. § 2.309(f)(1)(vi). Furthermore, Petitioners' fundamental argument -- that the AP1000 has "not been tested in the real world"<sup>96</sup> -- is not a valid basis for rejecting the Bellefonte COL application. If Petitioners' arguments were accepted, no new reactor design (regardless of how safe) could be licensed. Obviously, such an argument has no basis in the AEA or NRC regulations.

Finally, the Petitioners have designated this contention as "TS," a contention that purportedly pertains to the Technical Specifications per the Board's Initial Prehearing Order.<sup>97</sup> However, Contention TS-A does not even mention the Technical Specifications for the AP1000 or Bellefonte, let alone identify any dispute with the Technical Specifications. This provides an additional ground for rejecting Contention TS-A in accordance with 10 C.F.R. § 2.309(f)(1)(vi).

#### **d. Contention A/FI-A - - NRC Independence**

Contention A/FI-A argues that the independence of the NRC has been compromised by the Energy Policy Act of 2005.<sup>98</sup> Petitioners' arguments constitute an impermissible collateral attack on the Energy Policy Act and the basic structure of the NRC regulatory process.

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<sup>95</sup> See also New Reactor Policy Statement, 73 Fed. Reg. at 20,970 (citing 10 C.F.R. § 52.63).

<sup>96</sup> Petition at 15.

<sup>97</sup> Initial Prehearing Order at 2.

<sup>98</sup> Petition at 15-16.

Contentions that attack the statutes that govern the NRC are inadmissible.<sup>99</sup> Therefore, Contention A/FI-A is outside the scope of this proceeding and does not comply with 10 C.F.R. § 2.309(f)(1)(iii).<sup>100</sup>

Additionally, the Petitioners have designated this contention as “A/FI,” a contention that purportedly pertains to the Administrative and Financial Information in Part 1 of the Bellefonte Application per the Initial Prehearing Order.<sup>101</sup> However, Contention A/FI-A does not even mention Part 1 of the Application, let alone identify any dispute with Part 1. Furthermore, Petitioners’ allegations do not contest any other portion of the COL application. Therefore, Contention A/FI-A does not comply with 10 C.F.R. § 2.309(f)(1)(vi).

**e. Contention MISC-A1 - - Allegations regarding “Procedural Shell Games”**

Contention MISC-A1 provides a long quote from an oral argument in another proceeding in which a member of the licensing board characterized the NRC process in that proceeding as a shell game. Based upon that quotation, the Petitioners question whether NRC will be impartial and independent.<sup>102</sup>

Contention MISC-A1 does not identify any deficiencies in the Bellefonte Application, does not identify any issue with respect to the licensing process for Bellefonte, and does not even mention Bellefonte. The Commission has repeatedly stated that the adequacy of a license application, not the NRC staff’s evaluation, is the pertinent safety issue in any licensing

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<sup>99</sup> See *Shearon Harris*, LBP-07-11, 65 NRC at 57-58 (citing *Peach Bottom*, ALAB-216, 8 AEC at 20).

<sup>100</sup> In addition, the Petitioners misread the scope of the standby support insurance provided in the Energy Policy Act of 2005. Standby support insurance covers certain delays *after* issuance of the COL, and excludes administrative litigation at the Commission related to a COL application. See 42 U.S.C. § 16014(c)(1); 10 C.F.R. § 950.14(a). In fact, one cannot enter into a standby support contract until *after* a COL has been issued. See 10 C.F.R. § 950.12(a)(2). Thus, not only are Petitioners’ allegations inadmissible, the bases for the allegations are entirely specious.

<sup>101</sup> Initial Prehearing Order at 2.

<sup>102</sup> Petition at 16-19.

proceeding.<sup>103</sup> Similarly, NRC precedent makes clear that an adjudicatory proceeding is not the appropriate forum for Petitioners to state their views about NRC's process.<sup>104</sup> Therefore, Contention MISC-A1 fails to present a litigable issue within the scope of this proceeding and does not comply with 10 C.F.R. § 2.309(f)(1)(iii) and (iv).

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For the foregoing reasons, the former Contention 1 and its new reincarnation as five separate contentions are outside the scope of this proceeding, are immaterial, and do not demonstrate a genuine material dispute regarding the Bellefonte Application. Therefore, the Board should reject these contentions.

**2. Contention MISC-B (Former Contention 2) - - Alleged NRC Violations of Due Process**

This contention<sup>105</sup> alleges that the NRC's radiation protection regulations violate the Fifth and Fourteenth Amendments of the U.S. Constitution.<sup>106</sup> In support of this contention, Petitioners assert that NRC regulations do not prevent elevated radiation exposure levels and do not protect all members of the public equally.<sup>107</sup> Petitioners argue that NRC regulations violate due process by allowing a dose to individual members of the public of 100 mrem, and that this

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<sup>103</sup> See Final Rule, Changes to the Adjudicatory Process, 69 Fed. Reg. at 2202.

<sup>104</sup> See *Susquehanna*, LBP-07-10, 66 NRC at 22-23; *Vogle*, LBP-07-3, 65 NRC at 252-53; *Peach Bottom*, ALAB-216, 8 AEC at 20-21 & n.33; see also *Siemaszko*, CLI-06-16, 63 NRC at 720.

<sup>105</sup> Although Petitioners label this contention as a "MISC" contention in their Supplemental Petition, they also indicate it has FSAR and National Environmental Policy Act ("NEPA") implications. Supplemental Petition at 4. However, Petitioners failed to follow the Board's instructions, which required Petitioners to "set forth the contention and supporting bases in full separately for each category into which it is asserted to fall." Initial Prehearing Order at 3. Additionally, Petitioners do not provide any information in their contention explaining how this is a FSAR or NEPA issue.

<sup>106</sup> Petition at 19.

<sup>107</sup> *Id.* at 20-22. Petitioners' equal protection claim is predicated on the assertion that children have a significantly higher risk of developing cancer from radiation than adults and that women have a higher risk of radiation-induced cancer than men.

would mean that 3 to 4 persons per 1,000 could die over a lifetime.<sup>108</sup> In their due process argument, Petitioners challenge the Price-Anderson Act and the U.S. Supreme Court decision that upheld the constitutionality of the Price-Anderson Act.<sup>109</sup>

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

Petitioners' challenge to NRC radiation dose limits constitutes an attack on the Commission's regulations in 10 C.F.R. Part 20. Such challenges are not permitted in agency adjudications.<sup>110</sup> Therefore, the portion of this contention that raises equal protection claims must be rejected because it is outside the scope of this proceeding.<sup>111</sup>

In addition, Petitioners' due process challenge amounts to a direct attack on the Price-Anderson Act. Attacks on applicable statutory requirements are outside the scope of an adjudicatory proceeding.<sup>112</sup> Therefore, the portion of this contention that raises due process claims also must be rejected.

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<sup>108</sup> *Id.* at 19-20.

<sup>109</sup> *Id.* at 21-22 (challenging *Duke Power Co. v. Carolina Env'l Study Group*, 438 U.S. 59 (1978)).

<sup>110</sup> See 10 C.F.R. § 2.335(a).

<sup>111</sup> Furthermore, the NRC has rejected claims that NRC's radiation exposure limits do not protect all members of the public adequately. See Sally Shaw; Denial of Petition for Rulemaking, 72 Fed. Reg. 71,083, 71,085 (Dec. 14, 2007) ("Although some epidemiological studies have shown that children, individuals in poor health, and the elderly are more radiosensitive to radiation at high doses and high dose rates, no adverse health effects have been observed in these populations at the doses associated with NRC's radiation protection regulations.").

<sup>112</sup> See *Fla. Power & Light Co.* (St. Lucie Nuclear Power Plant, Unit No. 2), ALAB-335, 3 NRC 830, 841 n.26 (1976); *Fla. Power & Light Co.* (Turkey Point, Units 3 and 4), 4 AEC 787, 788 (1972); *Douglas Point*, ALAB-218, 8 AEC at 89; *General Elec. Co.* (GETR Vallecitos), LBP-85-4, 21 NRC 399, 402 (1985); *Pa. Power & Light Co.* (Susquehanna Steam Electric Station, Units 1 and 2), LBP-79-6, 9 NRC 291, 323-24 (1979). It is also unclear why the Petitioners quote extensively from Justice Stevens' concurrence in *Duke Power Co. v. Carolina Env'l Study Group*, 438 U.S. 59, 102-03 (1978). See Petition at 21-22. Justice Stevens agreed that it was in the national interest to uphold the constitutionality of the Price-Anderson Act, but based his concurrence on issues of justiciability. See *Duke Power*, 438 U.S. at 103.

Moreover, the Petition fails to discuss, let alone controvert, any portion of TVA's Application that addresses compliance with radiation dose limits for individual members of the public and fails to show how issues related to the Price-Anderson Act are related to the Application. Thus, this contention fails to satisfy 10 C.F.R. § 2.309(f)(1)(vi), which requires contentions to cite and dispute particular statements in the Application.

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

### **3. Contention FSAR-B (Former Contention 3) - - Geology**

This contention alleges that “plant site geology is not suitable for nuclear reactors” and “geologic issues are not adequately addressed.”<sup>113</sup> Petitioners base their conclusions on alleged inaccurate information in the Bellefonte FSAR regarding caves and sinkholes<sup>114</sup> and an alleged failure by the Applicant to update the Eastern Tennessee Seismic Zone (“ETSZ”) source models from the 1986 Electric Power Research Institute Seismicity Owners Group (“EPRI/SOG”) report.<sup>115</sup>

As demonstrated below, this contention should be dismissed because (1) Petitioners' claims regarding caves and sinkholes are not material to the acceptability of the Bellefonte site, contrary to 10 C.F.R. § 2.309(f)(1)(iv); (2) the contention does not provide a sufficient basis for requesting an update of the EPRI/SOG model, contrary to 10 C.F.R. § 2.309(f)(1)(ii); and (3) even assuming that the EPRI/SOG model is updated, the contention does not allege or

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<sup>113</sup> Petition at 22.

<sup>114</sup> *Id.* at 24-25.

<sup>115</sup> *Id.* at 26.

demonstrate that there would be any change in the safe shutdown earthquake identified in the Application, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

First, this contention should be dismissed because Petitioners fail to demonstrate that the issues raised in this contention are “material to the findings the NRC must make to support the action that is involved in the proceeding,” contrary to 10 C.F.R. § 2.309(f)(1)(iv). As noted above, the Commission has observed, “[t]he dispute at issue is ‘material’ if its resolution would ‘make a difference in the outcome of the licensing proceeding.’”<sup>116</sup> Petitioners’ allegations fail to demonstrate that acceptance of their contention would result in such a difference.

Petitioners’ statements regarding caves do not identify any material difference to the outcome of this proceeding. FSAR Section 2.5.4.1.3 states that 1,526 caves are reported in Jackson County, which contains the Bellefonte site.<sup>117</sup> Petitioners argue that the Alabama Cave Survey database actually shows 1,854 caves in Jackson County.<sup>118</sup> Additionally, Petitioners state that the Alabama Cave Survey database shows 58 caves within 5 miles of Bellefonte.<sup>119</sup> But Petitioners do not demonstrate how this minor difference in the number of caves throughout the entire county has a material effect on this proceeding, especially when Petitioners do not even claim that any caves exist on the site, let alone that any such caves would have any effect on the proposed facility. Importantly, Petitioners fail to rebut the conclusion in the FSAR that “no enterable caves have been located” at the site.<sup>120</sup>

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<sup>116</sup> *Oconee*, CLI-99-11, 49 NRC at 333-34; see also Final Rule, Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, 54 Fed. Reg. at 33,172.

<sup>117</sup> Petition at 23.

<sup>118</sup> *Id.* at 24.

<sup>119</sup> *Id.*

<sup>120</sup> *Id.* at 23.

Similarly, Petitioners have provided no information on sinkholes that is materially different from the information provided in the Application. Petitioners provide a map and claim that five sinkholes have occurred within two miles of the Bellefonte site.<sup>121</sup> However, that information is not materially different than the information provided in FSAR Section 2.5.1.2.3.2.1, which states:

Sinkhole features - - closed depressions with internal drainage, occur commonly throughout the Knox Group outcrop belt - - one relatively recent/apparently active small sinkhole or collapse feature was observed southwest of the BLN [Bellefonte] site on an adjacent land owner's property during aerial reconnaissance of the area.

Similarly, FSAR Section 2.5.4.1.3 reports that Jackson County contains extensive sinkhole plains. Thus, the contention does not raise a genuine dispute on a material issue with respect to sinkholes.

In this regard, Petitioners also do not demonstrate or even allege that there are any sinkholes at the Bellefonte site itself. In particular, this contention does not dispute the FSAR statements that “[n]o natural sinkholes” have been identified at the site and “[i]nvestigations at the BLN site by TVA, both past and present, have not identified large-scale karst features.”<sup>122</sup> Therefore, even assuming that Petitioners’ information is accurate, it is not materially different than the information in the FSAR. The Commission has held that each contention must be one that, if proven, would entitle the petitioner to relief.<sup>123</sup> This is not the case here.

Petitioners’ other basis, that TVA has not updated the EPRI/SOG model, likewise does not raise a genuine dispute on a material issue. Petitioners do not reference or provide expert

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<sup>121</sup> *Id.* at 24-25.

<sup>122</sup> FSAR § 2.5.4.1.3.

<sup>123</sup> *McGuire*, CLI-02-26, 56 NRC at 363 n.10.

support for their statements regarding the EPRI/SOG report.<sup>124</sup> Instead, based upon information in the FSAR, a statement in Regulatory Guide 1.208, and an NRC staff Request for Additional Information (“RAI”), Petitioners *argue* that an update of the EPRI/SOG model is warranted.

Specifically, Petitioners reference a statement from Regulatory Guide 1.208<sup>125</sup> that new information related to a seismic source must be evaluated and incorporated into the seismic analysis as appropriate.<sup>126</sup> However, Regulatory Guide 1.208 does not require that a seismic model be updated whenever there is new information or new studies. Instead, Regulatory Guide 1.208 states:

If the new data, such as new seismic sources and new ground motion attenuation relationships, are consistent with the existing earth science database, updating or modification of information used in the hazard analysis is not required.<sup>127</sup>

Petitioners have not provided any basis for believing that the new information or new studies that they identify would warrant an update to the EPRI/SOG model.<sup>128</sup> In particular:

- Petitioners state that Bellefonte is located in the ETSZ, that zone is considered to be one of the most active seismic areas east of the Rocky Mountains, and that “recent studies” have indicated that this seismic zone may have the potential to produce larger magnitude earthquakes.<sup>129</sup> However, this information is already contained in FSAR Sections

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<sup>124</sup> See Petition at 26-29.

<sup>125</sup> NRC Regulatory Guide 1.208, *A Performance-Based Approach to Define the Site-Specific Earthquake Ground Motion* (Mar. 2007).

<sup>126</sup> Petition at 26.

<sup>127</sup> Regulatory Guide 1.208, at 4.

<sup>128</sup> The Petition alleges that if a fault lies under the Tennessee Valley, then a magnitude 5.0 earthquake is possible and would cause serious damage to a nuclear plant. Petition at 29. However, the Petitioners provide absolutely no references or expert support for such allegations, and they appear to be based upon speculation.

<sup>129</sup> *Id.* at 26.

2.5.1.1.4.2.4.2 and 2.5.2.4.1.3, and therefore does not raise a genuine dispute of material fact.

- Petitioners reference a magnitude 4.6 earthquake at Fort Payne in 2003, and a magnitude 4.6 earthquake near Knoxville in 1973.<sup>130</sup> However, information on the Fort Payne earthquake is discussed in FSAR Section 2.5.2.1.2.1, and information on the earthquake near Knoxville is discussed in FSAR Section 2.5.1.1.4.2.4.2 (which is referred to in the FSAR as the Maryville earthquake). Thus, the FSAR already accounts for those earthquakes.
- Petitioners allege that in recent years there have been numerous small earthquakes in the immediate vicinity of the 2003 earthquake at Fort Payne.<sup>131</sup> However, FSAR Table 2.5-223 identifies recent seismic events in the northeastern Alabama area. Thus, the FSAR already accounts for those earthquakes.
- Petitioners reference FSAR Figure 2.5-250 for the proposition that more recent studies “place a *significantly* higher probability on larger maximum magnitude earthquakes.”<sup>132</sup> However, the text and figure in the FSAR do not support such an allegation. For example, FSAR page 2.5-67 contains essentially the same statement as provided by Petitioners, minus the word “significantly.” Furthermore, this page of the FSAR goes on to state:

However, no large historical or prehistorical earthquakes have been identified in these sources that would provide evidence for larger maximum magnitudes, and the EPRI-SOG maximum magnitude distributions for these sources do span the range of more recent assessments. Therefore, the EPRI-SOG maximum

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<sup>130</sup> *Id.* at 27.

<sup>131</sup> *Id.* at 28.

<sup>132</sup> *Id.* at 26 (emphasis added).

magnitude assessments for these sources are judged to be appropriate for use in PSHA calculations for the BLN site.

Petitioners have provided no basis for questioning this provision in the FSAR, contrary to 10 C.F.R. § 2.309(f)(1)(ii).<sup>133</sup>

Finally, Petitioners allege (without any references or citations) that the staff is concerned that the EPRI/SOG model for the ETSZ may not adequately characterize the potential for larger earthquakes.<sup>134</sup> However, the NRC staff has not stated that the EPRI/SOG should be updated; instead, the staff has issued RAI 2.5.2-1 which requests a “discussion and basis for including or not including the newer source models in the overall final PSHA [probabilistic seismic hazards analysis].”<sup>135</sup> Petitioners ignore TVA’s response to RAI 2.5.2-1, submitted on March 19, 2008.<sup>136</sup> That response states that TVA is part of an industry team that is developing reports to respond to the issues in RAI 2.5.2-1.<sup>137</sup> As committed in the RAI response, those reports were submitted to the NRC on May 14, 2008.<sup>138</sup> Those reports also were referenced in TVA’s

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<sup>133</sup> Petitioners also state that, in addition to maximum magnitude, there are other variables such as probability that should be, but are not, taken into account by the FSAR. *Id.* at 26-27. However, FSAR Section 2.5.2.4.1.2 does discuss the impact of new seismic information on earthquake recurrence rates and concludes that “the EPRI evaluation adequately represent[s] the seismicity rates within 200 mi. of the BLN site based on more recent information.”

<sup>134</sup> *Id.* at 26.

<sup>135</sup> Letter from J. Sebrosky, NRC, to A. Bhatnagar, TVA, Request for Additional Information – Tennessee Valley Authority Combined License Application for Bellefonte Units 3 and 4 (Feb. 15, 2008) (ADAMS Accession Number ML080450502). This reference to the staff’s RAI as a basis for this contention also runs afoul of long-standing Commission precedent. The Commission has held that “petitioners must do more than rest on the mere existence of RAIs as a basis for their contention.” Instead, a petitioner must provide an “analysis, discussion, or information of their own on any of the issues raised in the RAIs.” *Oconee*, CLI-99-11, 49 NRC at 336-37. Petitioners have not done this.

<sup>136</sup> Letter from J. Bailey, TVA, to NRC, Nuclear Regulatory Commission (NRC) – Bellefonte Nuclear Plant (BLN) Combined License (COL) Application – Response to Request for Additional Information (RAI) - Seismology (Mar. 19, 2008) (ADAMS Accession Number ML080640487).

<sup>137</sup> *Id.*, Enclosure 1, at 3.

<sup>138</sup> Letter from A. Heymer, NEI, to N. Chokshi, NRC, EPRI White Papers in Support of New Plant Applications (May 14, 2008) (ADAMS Accession Number ML081420056).

supplemental response to RAI 2.5.2-1, and therefore are part of the Bellefonte docket.<sup>139</sup> The ETSZ white paper provided as part of this May 14 submittal concludes:

Differences in maximum magnitude distributions for the ETSZ between the EPRI-SOG study and more recent studies (the TIP and DSS studies) indicate that alternative interpretations of  $m_{\max}$  have a higher mean value than was assessed in the EPRI-SOG study. Adopting this alternative distribution for ETSZ sources would increase seismic hazard estimates for a site located within the ETSZ. A compensating effect would be that more recent seismicity since the EPRI-SOG study indicates lower mean rates of activity in the ETSZ. Overall, combining the alternative  $m_{\max}$  distributions into an integrated analysis that accounts for changes in mean rates of earthquake activity leads to estimates of changes in GMRS [ground motion response spectra] amplitude for a site within the ETSZ between -0.6% and +1.0%. These changes are on the same order of precision with which GMRS amplitudes are generally reported in nuclear plant license applications. The conclusion is that the potential change in GMRS resulting from integrating the alternative  $m_{\max}$  distribution into the analysis is not significant, compared to GMRS amplitudes calculated using the EPRI-SOG (1989)  $m_{\max}$  distributions and activity rates.

These conclusions support the basis for no adjustments to the ETSZ as currently documented in the ESP [early site permit] and COL applications submitted to date.<sup>140</sup>

Petitioners do not claim or provide any information that is inconsistent with this conclusion. Moreover, Petitioners do not demonstrate that updating the EPRI/SOG model would alter the conclusions in the FSAR regarding seismic issues. The NRC has stated that “an intervention petitioner has an *ironclad obligation to examine the publicly available documentary material.*”<sup>141</sup> The Commission has also stated that the petitioner must “read the pertinent portions of the license application . . . [and] state the applicant’s position and the petitioner’s

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<sup>139</sup> Letter from Andrea Sterdis, TVA, to NRC, Nuclear Regulatory Commission (NRC) – Bellefonte Combined License (COL) Application – Response to Request for Additional Information – Supplemental Seismology Information (May 30, 2008) (ADAMS Accession Number ML081550232).

<sup>140</sup> Electric Power Research Institute, *White Paper on Seismic Hazard in the Eastern Tennessee Seismic Zone* (May 12, 2008) (ADAMS Accession Number ML081420085).

<sup>141</sup> *Catawba*, ALAB-687, 16 NRC at 468 (emphasis added).

opposing view,” and explain why it disagrees with the applicant.<sup>142</sup> Petitioners have not explained or even alleged that an update of the EPRI/SOG model would affect the safe shutdown earthquake identified in the FSAR. A contention that does not directly controvert a position taken by an applicant in an application is subject to dismissal.<sup>143</sup> For this reason, the contention does not satisfy the requirement to “show that a genuine dispute exists,” contrary to 10 C.F.R. § 2.309(f)(1)(vi).

For the foregoing reasons, Petitioners’ allegations regarding caves and sinkholes are immaterial, the contention does not provide a sufficient basis for updating the EPRI/SOG model, and the contention does not allege or demonstrate that an update of the EPRI/SOG would affect the safe shutdown earthquake. Therefore, the Board should reject this contention.

#### **4. Contention MISC-C (Former Contention 4) - - Terrorist Attacks**

In this contention,<sup>144</sup> Petitioners argue that TVA’s Application fails to consider the environmental impacts of a terrorist attack.<sup>145</sup> Petitioners claim that the terrorist attacks on September 11, 2001 show that the NRC policy of not considering the environmental impacts of terrorist attacks during its NEPA review is no longer viable.<sup>146</sup> In addition, Petitioners assert that the NRC should exercise new authority under a Presidential Directive in which the U.S. Department of Homeland Security delegated to the NRC certain responsibilities in the event of a

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<sup>142</sup> Final Rule, Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, 54 Fed. Reg. at 33,170; *see also Millstone*, CLI-01-24, 54 NRC at 358.

<sup>143</sup> *See Comanche Peak*, LBP-92-37, 36 NRC at 384.

<sup>144</sup> Although Petitioners label this contention as a “MISC” contention in their Supplemental Petition, they also indicate it has FSAR, NEPA, and Emergency Planning (“EP”) implications. Supplemental Petition at 4. However, Petitioners failed to follow the Board’s instructions, which required Petitioners to “set forth the contention and supporting bases in full separately for each category into which it is asserted to fall.” Initial Prehearing Order at 3. Additionally, Petitioners do not provide any information in their contention explaining how this is a FSAR or EP issue. Instead, the contention focuses on cases addressing NEPA issues. TVA responds to this contention accordingly.

<sup>145</sup> Petition at 29.

<sup>146</sup> *Id.*

nuclear or radiological terrorist incident.<sup>147</sup> Petitioners also claim that the U.S. Court of Appeals for the Ninth Circuit decision in *San Luis Obispo Mothers for Peace v. NRC*, 449 F.3d 1016 (9th Cir. 2006), indicates the NRC now believes that the environmental impacts from terrorist attacks are “reasonably foreseeable.”<sup>148</sup> Finally, apparently recognizing that the Commission has already addressed this issue numerous times, Petitioners argue that the Commission policy to only apply the *Mothers for Peace* decision in the Ninth Circuit is “unreasonable.”<sup>149</sup> As demonstrated below, this contention should be dismissed because it is outside the scope of this proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii).<sup>150</sup>

Since the events of September 11, 2001, the Commission and its licensing boards have consistently held that the NRC staff does not need to consider, as part of its environmental review, terrorist attacks on nuclear power plants.<sup>151</sup> Recently, in *Grand Gulf*, the Commission refused to admit a NEPA-terrorism contention in a 10 C.F.R. Part 52 licensing proceeding.<sup>152</sup> Relying on the reasoning in its *Oyster Creek* decision, the Commission stated:

“The ‘environmental’ effect caused by third-party miscreants ‘is . . . simply too far removed from the natural or expected consequences of agency action to require a study under NEPA.’” The claimed impact is too attenuated to find the proposed federal action to be the “proximate cause” of that impact.<sup>153</sup>

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<sup>147</sup> *Id.* at 30.

<sup>148</sup> *Id.* at 31.

<sup>149</sup> *Id.*

<sup>150</sup> A Licensing Board in another adjudicatory proceeding recently rejected a virtually identical contention for these reasons. *See Shaw AREVA MOX Servs. (Mixed Oxide Fuel Fabrication Facility)*, LBP-07-14, 66 NRC 169, 193-95 (2007).

<sup>151</sup> *See, e.g., Amergen Energy Co., LLC (License Renewal for Oyster Creek Nuclear Generating Station)*, CLI-07-08, 65 NRC 124 (2007); *System Energy Res., Inc. (Early Site Permit for Grand Gulf ESP Site)*, CLI-07-10, 65 NRC 144 (2007); *Nuclear Mgmt. Co., LLC (Palisades Nuclear Plant)*, CLI-07-9, 65 NRC 139 (2007); *Vogtle, LBP-07-3*, 65 NRC at 269.

<sup>152</sup> *Grand Gulf*, CLI-07-10, 65 NRC at 146.

<sup>153</sup> *Id.* at 146-47 (quoting *Oyster Creek*, CLI-07-08, 65 NRC at 129).

In *Oyster Creek*, the Commission expressly rejected the assertion that the Ninth Circuit’s decision in *Mothers for Peace* requires the NRC and its licensees to address the environmental costs of a successful terrorist attack on a nuclear plant.<sup>154</sup> The Commission explained that, while it was required to comply with the Ninth Circuit’s remand in the *Diablo Canyon* proceeding, it “is not obliged to adhere, in all of its proceedings, to the first court of appeals decision to address a controversial question.”<sup>155</sup> The Commission’s *Grand Gulf* and *Oyster Creek* decisions thus require that this contention be rejected. Where a matter has been considered by the Commission, it may not be reconsidered by a Board.<sup>156</sup>

For the foregoing reasons, this contention is outside the scope of this proceeding. Therefore, the Board should reject this contention.

**5. Contention MISC-D (Former Contention 5) - - Availability of Uranium**

This contention<sup>157</sup> alleges that the COL application does not discuss the reliability of the uranium supply and that worldwide consumption of uranium exceeds production.<sup>158</sup> Petitioners

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<sup>154</sup> See *Oyster Creek*, CLI-07-08, 65 NRC at 128-29.

<sup>155</sup> *Id.*

<sup>156</sup> See *Va. Elec. & Power Co.* (North Anna Nuclear Power Station, Units 1 & 2), ALAB-584, 11 NRC 451, 463-65 (1980); *Vogtle*, LBP-07-3, 65 NRC at 269. Petitioners’ discussion of “new authority” given to the NRC in responding to a nuclear or radiological terrorist incident and a National Response Plan does not place this NEPA-terrorism contention within the scope of this proceeding. The Presidential Directive the Petitioners cite concerning the development of a National Response Plan is from 2004, more than two years *before* the Commission decision in *Oyster Creek*. Thus, the NRC already was exercising this “new authority” when it reaffirmed that the environmental impacts of terrorism are not within the scope of licensing proceedings. Furthermore, in the *Oyster Creek* decision, the Commission recognized that “ongoing post-9/11 enhancements provide the best vehicle for protecting the public.” *Oyster Creek*, CLI-07-08, 65 NRC at 130.

<sup>157</sup> Although Petitioners label this contention as a “MISC” contention in their Supplemental Petition, they also indicate it has NEPA and Technical Specification (“TS”) implications. Supplemental Petition at 4. However, Petitioners failed to follow the Board’s instructions, which required Petitioners to “set forth the contention and supporting bases in full separately for each category into which it is asserted to fall.” Initial Prehearing Order at 3. Additionally, Petitioners do not explain how this is a TS issue, except for one reference to the Technical Specifications related to core reactivity. Petition at 33. This challenge to the Technical Specifications is outside the scope of this proceeding, because in accordance with Section VIII.C.5 of Appendix D of 10 C.F.R. Part 52, matters that come within the scope of the AP1000 generic Technical Specifications are not admissible in a COL proceeding unless a petitioner makes the showing required by that section (which the Petitioners have not attempted to do).

argue that the COL application implicitly presumes the availability of uranium to fuel the proposed units, without discussing the availability of uranium.<sup>159</sup> As demonstrated below, this contention should be dismissed because the bases provided in the contention do not establish a genuine dispute with the Application on a material issue of law or fact, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

Bellefonte ER Section 10.2.2.4 “Uranium Fuel Cycle and Depletion of Uranium” discusses the availability of uranium, and the relative impact of the increase in demand for uranium to fuel the proposed units. That discussion specifically notes that worldwide consumption of uranium for nuclear power exceeds production, and explains why production is expected to increase to meet rising demand. This contention does not dispute any of these statements or make any assertions that conflict with them.

The failure of the Petition to reference ER Section 10.2.2.4 is sufficient reason by itself to reject this contention, because 10 C.F.R. § 2.309(f)(1)(vi) specifically directs that each contention “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 . . . .”<sup>160</sup> To be sure, this contention does reference certain other parts of the Application, including (1) a discussion of core reactivity in the Technical Specifications Bases<sup>161</sup>; and (2) various statements about TVA’s mission to provide reliable, low-cost

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<sup>158</sup> Petition at 32-33. The contention also states that 10 C.F.R. § 50.33(f) requires an assessment of fuel cycle costs. Such an assessment is provided in Section 1.3.3 of Part 1 of the Bellefonte COL application. The Petitioners have provided no basis for contesting that assessment.

<sup>159</sup> *Id.* at 33-34.

<sup>160</sup> Additionally, Petitioners do not dispute any of the statements in ER Section 10.2.2.4, or even the statements in the COL application sections that they reference in connection with this contention. A contention that purports to challenge an application’s analysis without specifically addressing or calling into question that analysis fails to show that there is a genuine dispute. *USEC*, CLI-06-10, 63 NRC at 461-62.

<sup>161</sup> Petition at 33.

electricity.<sup>162</sup> However, these references to the COL application have, at most, an indirect relationship to the proposed contention and do not remedy the failure to reference the portion of the Application that directly addresses the subject matter of the contention—uranium supply.

Additionally, the two webpages cited by Petitioners in support of their contention actually undermine their arguments. For example, the first website cited by Petitioners indicates that “the world’s present measured resources of uranium (5.5 Mt) in the cost category somewhat below present spot prices and used only in conventional reactors, are *enough to last for over 80 years*.”<sup>163</sup> This website further explains that “[t]here was very little uranium exploration between 1985 and 2005, so the significant increase in exploration effort that we are now seeing could readily double the known economic resources.”<sup>164</sup>

Similarly, the second website to which Petitioners cite indicates that uranium production is actually increasing due to new mines, such as those in Canada and Australia:

Canada has two major mines which came into production in 1999: Cameco’s McArthur River deposit has enormous high-grade reserves and supplies ore from its underground mine to the Key Lake mill, to produce some 7200 tU/yr. Areva’s McClean Lake mine can produce over 2000 tU/yr.

Cameco’s Cigar Lake underground mine is being developed for 2010 or 2011 start-up. It will truck ore for treatment at McClean Lake and Rabbit Lake mills, 70 km away, to produce 7000 tU/yr. Areva’s Midwest mine is ready to develop, with ore milled at McClean Lake nearby, to produce 2200 tU/yr.

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<sup>162</sup> *Id.* at 34.

<sup>163</sup> Supply of Uranium: WNA, <http://www.world-nuclear.org/info/inf75.html?terms=uranium+supply> (emphasis added). In addition, the Organization for Economic Co-operation and Development Nuclear Energy Agency and the International Atomic Energy Agency jointly prepare periodic updates on world uranium resources, production, and demand, commonly referred to as the “Red Book.” While the Red Book acknowledges the challenges of developing mines and increasing uranium production, it clearly indicates that “[r]egardless of the role that nuclear energy ultimately plays in meeting rising electricity demand, the uranium resource base described [in the Red Book] *is adequate to meet projected future requirements*.” Uranium 2007: Resources, Production and Demand (A Joint Report by OECD Nuclear Energy Agency and the International Atomic Energy Agency), at 12 (2008) (emphasis added).

<sup>164</sup> Supply of Uranium: WNA, <http://www.world-nuclear.org/info/inf75.html?terms=uranium+supply>.

With all these operating, Canadian output could be substantially be [sic] concentrated at two mills: McClean Lake producing about 7800 tU and Key Lake 10,700 tU per year, with about 2300 t/yr coming from Rabbit Lake. All this will be about half of projected world mine production.

In Australia there are plans to triple the uranium output of Olympic Dam, to about 12,700 tonnes U per year. Meanwhile the three Australian mines produce some 8000 tonnes U per year, bout [sic] 20% of world mine production.<sup>165</sup>

These websites cited by Petitioners to support their contention actually contradict the contention and do not support the notion that uranium supply is unreliable. Thus, the bases provided in the Petition fail to raise a genuine dispute with the Application.<sup>166</sup>

For the foregoing reasons, this contention does not show that a genuine dispute exists with the Application on a material issue of law or fact. Therefore, the Board should reject this contention.

**6. Contention MISC-E (Former Contention 6) - - Attacks on NRC Regulations on Atmospheric Emissions of Radionuclides**

This contention<sup>167</sup> challenges emission standards for radionuclides and questions the validity of high-efficiency particulate air (“HEPA”) filters to control radionuclide emissions.<sup>168</sup> As demonstrated below, this contention should be dismissed because (1) it impermissibly challenges the NRC regulations on radionuclide emissions, contrary to 10 C.F.R.

§ 2.309(f)(1)(iii); and (2) the allegations related to HEPA filters constitute an impermissible

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<sup>165</sup> Uranium Mining: WNA, <http://www.world-nuclear.org/info/inf23.html> (citations omitted).

<sup>166</sup> Similarly, Petitioners’ suggestion that a plan regarding the use of alternate fuel, such as mixed oxide fuel (“MOX”), is missing from the Application is pure speculation. Petition at 33. The Application does not propose the use of MOX fuel, and Petitioners’ uncorroborated speculation does not establish a genuine dispute with the Application.

<sup>167</sup> Although Petitioners label this contention as a “MISC” contention in their Supplemental Petition, they also indicate it has NEPA and FSAR implications. Supplemental Petition at 4. However, Petitioners failed to follow the Board’s instructions, which required Petitioners to “set forth the contention and supporting bases in full separately for each category into which it is asserted to fall.” Initial Prehearing Order at 3.

<sup>168</sup> Petition at 34-37.

challenge to the AP1000 design certification rule and do not demonstrate that a genuine dispute exists with respect to HEPA filters, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

National Emission Standards for Hazardous Air Pollutants (“NESHAP”)

Petitioners state that radionuclide emissions are regulated as hazardous pollutants under the Clean Air Act and NESHAP require maximum achievable control technology (“MACT”) standards.<sup>169</sup> Therefore, Petitioners claim that the Bellefonte units will not meet Clean Air Act standards, because there is no MACT for radionuclides.<sup>170</sup> As support, Petitioners cite Appendix I to 10 C.F.R. Part 50 and state that the existing standard of a maximum exposure of 10 mrem/year for airborne emissions translates into a risk of 5.6 excess fatal cancers per 10,000 people.<sup>171</sup>

The term “air pollutant” is defined in the Clean Air Act to include radioactive “source material, special nuclear material, and byproduct material” that enters the ambient air.<sup>172</sup> Section 112(d)(9) of the 1990 Clean Air Act Amendments provides as follows:

No standard for radionuclide emissions from any category or subcategory of facilities licensed by the Nuclear Regulatory Commission (or an Agreement State) is required to be promulgated under this section if the Administrator determines, by rule, and after consultation with the Nuclear Regulatory Commission, that the regulatory program established by the Nuclear Regulatory Commission pursuant to the Atomic Energy Act [42 U.S.C.A. § 2011 et seq.] for such category or subcategory provides an ample margin of safety to protect the public health.<sup>173</sup>

In accordance with this provision, the U.S. Environmental Protection Agency (“EPA”) rescinded Subpart I of its air emission standards for commercial power reactors, finding that:

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<sup>169</sup> *Id.* at 35.

<sup>170</sup> *Id.* at 35-36.

<sup>171</sup> *Id.* (citing BEIR V, Table 4-2, at 172-73).

<sup>172</sup> 42 U.S.C. § 7602(g).

<sup>173</sup> *Id.* § 7412(d)(9).

EPA has determined that current radionuclide emissions from NRC-licensed nuclear power reactors during routine operations are consistently well below levels which would result in doses exceeding 10 mrem/year ede [effective dose equivalent]. Moreover, EPA has comprehensively evaluated the individual elements of the NRC regulatory program which control radionuclide emissions from these facilities. Based on this evaluation, EPA has determined that radionuclide emissions during routine operations of NRC-licensed nuclear power reactors are expected to remain well below levels which would result in a dose exceeding 10 mrem/year. EPA has further determined that NRC can and will require any licensed nuclear power reactor which has radionuclide emissions resulting in a dose exceeding 10 mrem/year to take specific actions which will reduce emissions to a level which results in a dose below 10 mrem/year. Based on these determinations, EPA finds under section 112(d)(9) that the NRC regulatory program for licensed commercial nuclear power reactors provides an ample margin of safety to protect public health.<sup>174</sup>

Accordingly, compliance with NRC regulations provides the basis for compliance with Section 112 of the Clean Air Act. Thus, Petitioners are legally incorrect to suggest there are “NESHAP radionuclide emission limits” beyond the standards set forth in NRC regulations or that the NRC must set some standard for MACT for air emissions of radioactivity.

In addition, Petitioners assert that “no MACT has been issued for radionuclides.”<sup>175</sup> Seemingly, Petitioners argue that either the NRC must establish MACT standards or the NRC regulations governing radionuclide emissions are inadequate. In either case, Petitioners’ claims amount to an impermissible challenge to the NRC regulations in 10 C.F.R. Part 20 and 10 C.F.R. Part 50, Appendix I.<sup>176</sup> Accordingly, this part of this contention should be rejected.

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<sup>174</sup> Final Rule, National Emission Standards for Radionuclide Emissions from Facilities Licensed by the Nuclear Regulatory Commission and Federal Facilities Not Covered by Subpart H, 60 Fed. Reg. 46,206, 46,210 (Sept. 5, 1995).

<sup>175</sup> Petition at 36.

<sup>176</sup> See 10 C.F.R. § 2.335(a).

## HEPA Filters for Heating, Ventilation, and Air Conditioning (“HVAC”)

This contention next states that the Bellefonte Application addresses the removal of radionuclides and other hazardous materials from gaseous emissions through the HVAC system, which uses HEPA filters.<sup>177</sup> Petitioners then assert that HEPA filters are an unreliable means of controlling radionuclide emissions, quoting a letter from Dr. Peter Rickards to the U.S. Department of Energy (“DOE”), wherein Dr. Rickards expresses concern over the ability of HEPA filters to stop plutonium “creep.”<sup>178</sup>

Petitioners’ discussion of the HVAC system fails to raise any issue within the scope of this proceeding. The HVAC system for the AP1000 design is addressed in Section 2.7 of Tier 1 and Section 9.4 of Tier 2 of the AP1000 DCD.<sup>179</sup> In addition, the gaseous waste system for the AP1000 design is addressed in Section 2.3.11 of Tier 1 and Section 11.3 of Tier 2 of the AP1000 DCD. In accordance with 10 C.F.R. § 52.63(a)(5) and Section VI of Appendix D of 10 C.F.R. Part 52, matters that come within the scope of the AP1000 design certification rule are considered resolved. Therefore, any challenges to such matters, including the use of HEPA filters in the HVAC systems of the AP1000, are outside the scope of this proceeding.<sup>180</sup>

In addition, Petitioners fail to provide sufficient information to show that there is a genuine dispute on a material issue of law or fact. The contention fails to reference the specific portions of the Bellefonte Application addressing the HVAC or gaseous waste systems that Petitioners dispute, contrary to 10 C.F.R. § 2.309(f)(1)(vi). Similarly, Petitioners fail to provide any explanation of how the issue of supposed plutonium creep at DOE facilities relates to a

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<sup>177</sup> Petition at 36.

<sup>178</sup> *Id.*

<sup>179</sup> For example, AP1000 DCD Tier 2 Sections 9.4.1.2.2 and 9.4.7.2.2 contain extensive discussion of the use of HEPA filters in the HVAC systems.

<sup>180</sup> *See also* New Reactor Policy Statement, 73 Fed. Reg. at 20,970 (citing 10 C.F.R. § 52.63).

dispute regarding TVA's use of HEPA filters at the Bellefonte facility. In fact, Table 11.3-3 of Tier 2 of the AP1000 DCD demonstrates that operation of an AP1000 is not expected to result in the release of airborne plutonium radionuclides.

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For the foregoing reasons, this contention impermissibly challenges the NRC regulations on emissions of radionuclides, and impermissibly attempts to raise an issue regarding HEPA filters that is resolved in the AP1000 design certification rule. Therefore, the Board should reject this contention.

**7. Contention NEPA-A (Former Contention 7) - - Water Use**

This contention alleges that Bellefonte will have “excessive water use contrary to TVA’s purpose.”<sup>181</sup> Additionally, Petitioners conclude that “[a]t this time, the dedication of water supply to Bellefonte 3 and 4 is ill-advised, imprudent, wasteful and contrary to the principal purposes for which the Tennessee Valley Authority was created in 1933: that is, river navigability, flood control, and agricultural and industrial development.”<sup>182</sup>

As demonstrated below, this contention should be dismissed because (1) it raises an issue regarding the TVA Act that is outside the scope of this proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii); (2) the allegations regarding excessive water use are not supported with expert opinion or other references, contrary to 10 C.F.R. § 2.309(f)(1)(v); and (3) the contention does not dispute the amount of water use identified in the Bellefonte ER and therefore does not demonstrate that a genuine material dispute exists with respect to the Application, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

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<sup>181</sup> Petition at 37.

<sup>182</sup> *Id.* at 39.

First, this contention should be dismissed because it raises an issue that is outside the scope of this proceeding. In particular, Petitioners' argument that water use by Bellefonte would be inconsistent with the TVA Act is not cognizable by the NRC. The TVA Act, the AEA, and the Energy Reorganization Act, which created the NRC, do not grant NRC authority to regulate TVA's compliance with the TVA Act. Instead, NRC's jurisdiction is limited to implementation of its organic statutes, such as the AEA.<sup>183</sup>

In any event, Petitioners' arguments related to the TVA Act are clearly incorrect. Petitioners imply that the TVA Act does not support TVA's Application to construct new nuclear power plants, stating that use of the water supply for Bellefonte Units 3 and 4 is "contrary to the principal purposes for which the Tennessee Valley Authority was created in 1933" and "[a]lthough the Tennessee Valley Authority Act did sanction the production of electric power, it was incidental."<sup>184</sup> Such arguments are completely unsupported by the Act. The NRC already has licensed and TVA has constructed a number of nuclear plants, including the currently operating Browns Ferry, Sequoyah, and Watts Bar nuclear power plants. Additionally, the TVA Act authorizes TVA to "produce, distribute, and sell electric power"<sup>185</sup> and requires TVA to "assure an ample supply of electric power" for "the physical, social and economic development

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<sup>183</sup> See, e.g., *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 161 (2000) (holding that no matter how important the issue, an administrative agency's power to regulate must always be grounded in a valid grant of authority from Congress); *Gage v. AEC*, 479 F.2d 1214, 1220 (D.C. Cir. 1973) (indicating that reviewing courts must determine whether an action would exceed statutory authority and go "beyond the agency's organic jurisdiction"). Courts also have ruled that NRC's obligations are found in the AEA and NEPA. See *Pub. Serv. Co. of N.H. v. NRC*, 582 F.2d 77, 86 (1978) ("The Commission is under a dual obligation: to pursue the objectives of the Atomic Energy Act and those of the National Environmental Policy Act."); *TVA* (Phipps Bend Nuclear Plant Units 1 and 2), LBP-77-14, 5 NRC 494 (1977), *aff'd*, ALAB-506, 8 NRC 533 (1978), holding that NRC has the authority to impose license conditions on TVA under NEPA, but not suggesting that NRC had any authority to regulate TVA under the TVA Act. Furthermore, a licensing board has recently stated that "absent some need for resolution to meet the agency's statutory responsibilities, the agency's adjudicatory process is not a forum for litigating matters that are primarily the responsibility of other federal . . . regulatory agencies." *Susquehanna*, LBP-07-10, 66 NRC at 27.

<sup>184</sup> Petition at 39.

<sup>185</sup> 16 U.S.C. § 831d(l).

of the area.”<sup>186</sup> Thus, the TVA Act specifically empowers TVA to produce electricity. In fact, courts have already reaffirmed TVA’s authority to construct nuclear power plants, even away from the Tennessee Valley.<sup>187</sup> Not only do Petitioners’ arguments related to the TVA Act raise an issue that is outside the scope of this proceeding, their interpretation of the TVA Act is inconsistent with the plain language of the Act and relevant case law.

Petitioners also contend that the Bellefonte ER “presents an overly optimistic assessment of water use in the Tennessee River Basin.”<sup>188</sup> As a basis for this contention, Petitioners state that Bellefonte would withdraw 71,021,664 gallons per day<sup>189</sup> from the Guntersville Reservoir on the Tennessee River, and that this withdrawal would dwarf all other water users in the Guntersville Reservoir watershed except one.<sup>190</sup> However, contrary to 10 C.F.R.

§ 2.309(f)(1)(vi), Petitioners’ bases do not create a “genuine dispute” with TVA. Petitioners simply repeat information that is found in the ER.<sup>191</sup> Since TVA provided the information used in the contention and Petitioners have not provided any basis for establishing that this information is incorrect, Petitioners have not demonstrated a genuine dispute with TVA.

Essentially, Petitioners are taking uncontested facts from the Bellefonte ER regarding plant water use, and then making arguments that water usage is “excessive.” However,

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<sup>186</sup> *Id.* § 831n-4(h).

<sup>187</sup> *See, e.g., Young v. TVA*, 606 F.2d 143 (6th Cir. 1979).

<sup>188</sup> Petition at 38.

<sup>189</sup> *Id.* As is discussed in ER Section 2.3.2.2.4, this value is the gross withdrawal. As is indicated in the same section, the discharge rate is about one-third of the withdrawal rate.

<sup>190</sup> *Id.* at 38-39. Petitioners also state that a drought last year forced a partial shutdown of TVA’s Browns Ferry plant due to high temperatures on the Tennessee River, but Petitioners do not explain the relevance of this statement to their contention regarding water use by Bellefonte. The Commission has held that a petitioner must explain the significance of any factual information upon which it relies. *See Fansteel*, CLI-03-13, 58 NRC at 204-05. Since Petitioners have not provided such an explanation with respect to their statement on Browns Ferry, the statement does not provide a sufficient basis for this contention.

<sup>191</sup> Petition at 37-39.

Petitioners offer no expert opinion or other support for their arguments. Therefore, this contention should also be dismissed because Petitioners fail to satisfy 10 C.F.R. § 2.309(f)(1)(v).

Finally, the impacts of water withdrawals are fully addressed in ER Section 5.2. In particular, ER Section 5.2.2.1.1 states (and Petitioners have not disputed) that Bellefonte will consume 0.28% of the monthly average flow of the river. As a result of this low consumption, the ER concludes that “[b]ased upon an evaluation of present and future water use, water withdrawal and discharge from the BLN are considered to be of SMALL direct, indirect and cumulative impact and mitigation is not warranted.”<sup>192</sup> Petitioners do not dispute this conclusion regarding water withdrawal. In fact, Petitioners do not reference or dispute any of the ER’s discussion of the impacts of water withdrawal. If a petitioner believes the license application fails to adequately address a relevant issue, then the petitioner is to “explain why the application is deficient.”<sup>193</sup> Furthermore, 10 C.F.R. § 2.309(f)(1)(vi) requires information in an admissible contention to “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.” Petitioners have not done this. A contention that does not directly controvert a position taken by the applicant in the application is subject to dismissal.<sup>194</sup>

In summary, to the extent that this contention alleges that water usage by Bellefonte will violate the TVA Act, the contention should be dismissed because it raises an issue that is outside the scope of this proceeding. To the extent that this contention addresses the environmental impacts of water usage by Bellefonte, the contention should be dismissed because it does not dispute any of the facts in the Bellefonte ER, does not offer any expert opinion to support its

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<sup>192</sup> ER § 5.2.

<sup>193</sup> Final Rule, Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, 54 Fed. Reg. at 33,170; *see also Palo Verde*, CLI-91-12, 34 NRC at 156.

<sup>194</sup> *See Comanche Peak*, LBP-92-37, 36 NRC at 384.

arguments that water usage will be excessive, and does not address the evaluation in ER Section 5.2 which demonstrates that water usage will be far less than 1% of the average river flow and therefore will have SMALL impacts. Accordingly, the Board should reject this contention.

**8. Contention NEPA-B (Former Contention 8) - - Aquatic Impacts**

This contention alleges that the ER does not adequately address aquatic impacts.<sup>195</sup>

Specifically, Petitioners claim that:

[T]he ER does not provide adequate data to sufficiently address:  
(1) The condition of resident and potadromous fish and freshwater mussels in the vicinity of the proposed intake and discharge points, Town Creek, Guntersville Reservoir, and Tennessee River basin;  
(2) Aquatic habitat conditions and flow/habitat relationships in both the project area, as well as in the lower-, middle-, and upper-Tennessee River; and (3) Cumulative impacts on aquatic resources from construction and operation of the proposed new intake and discharge.<sup>196</sup>

As demonstrated below, this contention should be dismissed because (1) it is not properly supported with expert opinion or references, contrary to 10 C.F.R. § 2.309(f)(1)(v); and (2) it incorrectly alleges that the ER does not consider certain factors, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

First, Petitioners fail to adequately support their contention, contrary to 10 C.F.R. § 2.309(f)(1)(v). Petitioners do not provide any expert opinion or other support for this contention. Instead, Petitioners merely quote sections of the ER and claim that they are inadequate.<sup>197</sup> In a few places, Petitioners provide vague references to other documents, such as “Etnier and Starnes 1993” or “Simon and Wallus 2006,”<sup>198</sup> but Petitioners do not provide the titles of these references, the publishers, the full names of authors, or even the type of documents

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<sup>195</sup> Petition at 39-40.

<sup>196</sup> *Id.* at 40.

<sup>197</sup> *Id.* at 40-45.

<sup>198</sup> *Id.* at 42.

(e.g., books, reports, news articles). These references are wholly inadequate. TVA and the NRC cannot be expected to guess the missing information or search for these references with such limited information. Furthermore, Petitioners do not provide any specific “pincites” to the specific portions, such as pages or sections, of these documents on which they rely. The Commission has held that such vague references are insufficient.<sup>199</sup>

Additionally, as discussed below, Petitioners misunderstand, misconstrue, or fail to identify relevant information in the ER.<sup>200</sup> A petitioner’s imprecise reading of a document cannot be the basis for a litigable contention.<sup>201</sup>

Petitioners claim that ER Section 2.3 “does not include an accurate site-specific description of the fish species and their respective life history stages.”<sup>202</sup> This information is not provided in Section 2.3, because that section “describes the physical, chemical, biological, and hydrological characteristics of surface waters and groundwater.”<sup>203</sup> Aquatic ecology, which includes fish species, is discussed in ER Section 2.4. In particular, ER Section 2.4.2.4 provides a thorough discussion of aquatic communities, including fish populations near the site.<sup>204</sup>

Next, Petitioners reference ER Section 2.3.1.2.6 claiming that “[t]he ER acknowledges that there will be impacts to the upper-Tennessee River aquatic resources because upstream

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<sup>199</sup> *Seabrook*, CLI-89-03, 29 NRC at 240-41.

<sup>200</sup> The information in the ER appropriately follows the organization of the NRC’s guidance in NUREG-1555, Standard Review Plans for Environmental Reviews for Nuclear Power Plants (Oct. 1999).

<sup>201</sup> *See Georgia Tech*, LBP-95-6, 41 NRC at 300.

<sup>202</sup> Petition at 41.

<sup>203</sup> ER § 2.3.

<sup>204</sup> Regarding fish populations, Petitioners also state that within the Guntersville Reservoir “there has been a 44% decline of freshwater fish captured in TVA sampling since 1994.” Petition at 42 (citing ER § 2.4.2.4). Petitioners misrepresent this section. The Application indicates that 82 different species of fish from the Guntersville Reservoir were collected between 1949 and 1994 (a period of 45 years), while 46 species were collected between 2002 and 2006 (a period of only 4 years). It stands to reason that additional species would be collected over a 45-year period versus a 4-year period. In addition, Petitioners make no attempt to explain the materiality of this information to the construction of Bellefonte Units 3 and 4.

reservoirs will bear the burden of downstream water withdrawal.”<sup>205</sup> Petitioners mischaracterize this section. Section 2.3.1.2.6 does not discuss impacts, but only states that if water flowing into Chickamauga Reservoir is less than needed, then additional water is released from upstream reservoirs. Petitioners further claim that Section 2.3.1.3.6 “acknowledges upstream management may also affect BLN operations that then may differentially affect aquatic resources.”<sup>206</sup> This too is incorrect. Although Section 2.3.1.3.6 states that five upstream dams and/or reservoirs can affect future plant operations, this section does not posit any impacts on aquatic resources.

Petitioners also incorrectly state that Section 2.3.1.3 “acknowledges that impoundments can significantly affect or be affected by BLN plant operations.”<sup>207</sup> Instead, this section states that there are three impoundments within 100 river miles of the site, which are “designed to maximize the public benefits of . . . water supply, and to maintain water quality,” and concludes that “[o]perations of these dams are not expected to have a direct effect on water quality in the vicinity of the BLN.” Thus, Petitioners have completely mischaracterized the statements in ER Section 2.3.1.3. Additionally, water-related impacts during operation are not even discussed in ER Section 2.3, but are discussed in Section 5.2. Petitioners have provided no information to dispute TVA’s conclusions or to explain why additional “elaboration, investigation, analysis, and discussion are warranted,” beyond what is already provided in the ER. Thus, their arguments do not support an admissible contention.

Petitioners further claim that the studies provided in the ER “do not assess the current conditions of the Tennessee River at the proposed intake and discharge sites” and “[t]he ER does

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<sup>205</sup> *Id.* at 41.

<sup>206</sup> *Id.*

<sup>207</sup> *Id.*

not include recent fish survey data.”<sup>208</sup> However, ER Section 2.4.2.4 explains that TVA continues to perform current monitoring in the areas around the Bellefonte site as part of the Reservoir Vital Signs Monitoring program. Additionally, Section 2.4.2.4 explains that the sampling at Tennessee River Mile (“TRM”) 375.2 identified results substantially similar to TRM 424.0, which justifies use of this information for the Bellefonte site at TRM 391.0. Petitioners have not disputed this justification, but instead rely on conclusory statements regarding the adequacy of the ER. Therefore, Petitioners’ contention that TVA has not provided current information near the site is simply unsupported.

Petitioners also claim that the ER does not evaluate the impact of the facility on aquatic habitats and the distribution of ichthyoplankton.<sup>209</sup> Again, these statements are simply incorrect and mischaracterize the ER. ER Sections 5.3.1.2.1 and 5.3.2.2 evaluate the impacts of the intake and discharge on aquatic habitats, and Section 5.3.1.2.1 discusses the types of ichthyoplankton in the Gunterville Reservoir and the impacts of entrainment on the ichthyoplankton. Petitioners have not identified any defect in that analysis, and in fact have not even referenced it.

Petitioners allege that additional information is missing from the ER.<sup>210</sup> Again, Petitioners either fail to acknowledge the existing information in the ER or misconstrue it. For example, Petitioners claim that “the ER does not address specific temporal and spatial habitat selection and utilization by resident and potadromous fish in the project area.”<sup>211</sup> This allegation is incorrect. This statement ignores the information provided in ER Section 2.4.2.2 regarding aquatic habitats. Additionally, Petitioners’ allegation ignores ER Section 5.3.2.2, which

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<sup>208</sup> *Id.* at 41, 43.

<sup>209</sup> *Id.* at 43-45.

<sup>210</sup> *Id.*

<sup>211</sup> *Id.* at 43.

discusses migratory fish on the Tennessee River and concludes that “[d]ue to the discharge plume size and location it is not expected to interfere with migration or breeding areas of fish within the Guntersville Reservoir.” Petitioners have not demonstrated how this information is insufficient and have provided no information or references that would indicate that the information is incorrect.

Next, Petitioners claim that the “ER fails to identify and consider direct impacts of the proposed intake structure on aquatic resources including fish and mussels” and “the ER does not adequately address the cumulative impacts on aquatic resources of the new intake structure.”<sup>212</sup> Such statements ignore the ER. ER Section 5.3.1.2 discusses the effects of the intake structure on aquatic ecosystems, including impacts on fish and mussels. Section 5.3.1.2.1 discusses fish impingement and entrainment, and states that a mussel survey performed in April 2007 identified only common mussels in low densities next to the site. Section 5.3.1.2.1 concludes that, given the low intake velocities for Bellefonte and the lack of important mussel species at the intake location, the impacts of the intake system on fish and mussels will be SMALL. Petitioners have not disputed this information and conclusion in the ER.

Petitioners also allege that the “ER mistakenly relies on the performance standards for cooling water intake structures adopted by EPA pursuant to Section 316(b) of the Clean Water Act, 40 C.F.R. § 125.94, as proxy for calculating the impacts of the intake structure.”<sup>213</sup> Petitioners provide no support for their argument regarding use of the EPA standards. In any event, Petitioners are simply incorrect in implying that the ER only relies upon EPA standards. Instead, the ER provides a discussion of a similar intake structure at the Widows Creek Fossil

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<sup>212</sup> *Id.* at 43-44.

<sup>213</sup> *Id.* at 44.

Plant, which is also on the Guntersville Reservoir.<sup>214</sup> Based upon the impacts at the Widows Creek facility, the ER determined that impacts at the Bellefonte site would be SMALL.<sup>215</sup>

Petitioners have not provided any information to dispute that conclusion.

Petitioners disagree with the statement in the ER that “[b]ecause species composition is similar for intrareservoir sampling and habitat near the intake and discharge structures are not rare or unique to the reservoir, additional sampling at the intake and discharge structures was not warranted.”<sup>216</sup> However, contrary to 10 C.F.R. § 2.309(f)(1)(vi), they provide no support for their argument that TVA’s statement is incorrect.

Petitioners construct similarly unsupported arguments regarding the impacts on aquatic species from discharges.<sup>217</sup> The impacts of the discharge system are discussed in ER Section 5.3.2, which is entirely ignored by Petitioners. Petitioners complain that the ER does not sufficiently discuss the molluskicide that will be used in the system, but they ignore the discussion of chemical impacts in ER Section 5.2.2.2.1, which states that “the treatment chemicals added are largely consumed leaving very small concentrations by the time they are discharged, [and] the discharge is regulated by the existing [National Pollutant Discharge Elimination System (“NPDES”)] permit and complies with applicable state water quality standards.” Petitioners have neither demonstrated why this is insufficient nor provided information to the contrary.

Petitioners’ contention is similar to a proposed contention that was submitted by some of the same petitioners and was recently rejected by the Board in the Vogtle Early Site Permit

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<sup>214</sup> ER § 5.3.1.2.1.

<sup>215</sup> *Id.*

<sup>216</sup> *Id.*

<sup>217</sup> Petition at 44-45.

(“ESP”) proceeding.<sup>218</sup> Similar to Petitioners, the *Vogtle* petitioners claimed that the ER only provided a description of the aquatic environment of the river in the general area of the plant and did not adequately assess the aquatic environment adjacent to the *Vogtle* site, and thereby failed to include an adequate aquatic habitat baseline.<sup>219</sup> The *Vogtle* Board rejected the contention, stating that “[i]t is equally apparent, however, that nothing in the agency’s Part 51 NEPA regulations, or the staff’s ER preparation guidance regarding providing a description of the local environment, indicates exactly how, as a general matter, such a baseline is to be established.”<sup>220</sup> Additionally, the Board stated that “Joint Petitioners have not demonstrated with any references [or sufficient factual or expert opinion] . . . that suggest site-specific studies are generally required.”<sup>221</sup> Similarly, Petitioners in this proceeding have provided no references, facts, or expert opinion to support their allegations that a study of the river at the Bellefonte intake and discharge structures is needed or to support their criticisms of TVA’s methodology for establishing an aquatic baseline.

In summary, a contention “will be ruled inadmissible if the petitioner ‘has offered no tangible information, no experts, no substantive affidavits,’ but instead only ‘bare assertions and speculation.’”<sup>222</sup> Petitioners have offered no experts and no tangible information to dispute the ER. Therefore, this contention is unsupported and should be dismissed.

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<sup>218</sup> *Vogtle*, LBP-07-3, 65 NRC at 255-57.

<sup>219</sup> *Id.*

<sup>220</sup> *Id.* at 256.

<sup>221</sup> *Id.* at 257. The *Vogtle* Board admitted a contention challenging the impacts of the intake and discharge systems. *Id.* at 258-59. That contention was supported by an affidavit from an expert that discussed each of the alleged deficiencies in the ER and provided specific references to the ER. *See id.* at 258. In contrast, as discussed above, the Petitioners have failed to adequately support their contention and have failed to address pertinent information in the ER.

<sup>222</sup> *Fansteel*, CLI-03-13, 58 NRC at 203 (quoting *GPU Nuclear*, CLI-00-6, 51 NRC at 208).

For the foregoing reasons, this contention is not properly supported and does not demonstrate that a genuine material dispute exists. Therefore, the Board should reject this contention.

9. **Contention NEPA-C (Former Contention 9) - - TVA's Integrated Resource Plan ("IRP")**

This contention states "Alternatives to the Proposed Action Lacking."<sup>223</sup> This heading is followed by approximately three pages of text that consist of excerpts from the ER interspersed with a few brief comments. The comments assert that (1) TVA ignores the letter and spirit of the IRP (TVA's 1995 Integrated Resource Plan)<sup>224</sup>; (2) TVA has not responded to requests for a copy of an update to the IRP<sup>225</sup>; (3) the people of the Tennessee Valley want a different future from the one envisioned by TVA<sup>226</sup>; and (4) TVA's demand side management ("DSM") forecast is not reasonable or adequate.<sup>227</sup>

As demonstrated below, this contention should be dismissed because (1) it does not provide a specific statement of an issue of law or fact to be raised with respect to the consideration of alternatives, contrary to 10 C.F.R. § 2.309(f)(1)(i); (2) the allegations regarding inconsistencies with TVA's IRP are outside the scope of this proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii); (3) the contention is not supported by expert opinion or references, contrary to 10 C.F.R. § 2.309(f)(1)(v); and (4) the contention does not demonstrate that a genuine dispute exists with respect to the discussion of DSM in the Bellefonte ER, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

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<sup>223</sup> Petition at 45.

<sup>224</sup> *Id.*

<sup>225</sup> *Id.*

<sup>226</sup> *Id.* at 46.

<sup>227</sup> *Id.* at 47.

This contention's statement that "Alternatives to the Proposed Action Lacking" does not provide a specific statement of an issue of law or fact to be raised, and is therefore contrary to the requirements of 10 C.F.R. § 2.309(f)(1)(i). ER Chapter 9, "Alternatives to the Proposed Action," provides a thorough discussion of a large number of alternatives, including energy alternatives.<sup>228</sup> If Petitioners are contending that an additional alternative should have been considered, this contention does not identify the allegedly omitted alternative, and it does not explain the nature of the alleged inadequacy. A vague sentence fragment, such as "Alternatives to the Proposed Action Lacking," does not meet the NRC's standards for contentions.

Petitioners' four comments are presumably intended as statements of support for this contention, but they do not provide an adequate basis for a contention, either individually or collectively. Comment 1 asserts: "TVA in its pursuit for additional nuclear capacity ignores the letter and spirit of the IRP."<sup>229</sup> This does not identify any inconsistency between the IRP and the COL application, or explain how any such inconsistency could be within the scope of this proceeding. This proceeding concerns the adequacy of the COL application, not whether TVA is complying with its IRP. Therefore, this comment does not identify an issue within the scope of this proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii).

Comment 2 alleges that "[t]he TVA claims to have 'updated' the IRP, but TVA has not responded to requests for a copy of that update."<sup>230</sup> The Petition does not cite the basis for attributing such a claim to TVA, or explain when or how any such requests were made. The only relevant statement in the ER about an update is in Chapter 8:

The TVA conducted a comprehensive review of demand for power, power supply and need for power in its Integrated Resource

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<sup>228</sup> See ER at 9-i to 9-iii.

<sup>229</sup> Petition at 45.

<sup>230</sup> *Id.*

Plan, Energy Vision 2020 EIS (TVA 1995) which evaluated a suite of options addressing these issues out through the year 2020 (Reference 1). *The information presented in this section constitutes an update of those earlier analyses of need for power as they relate to the present proposal for the BLN site.*<sup>231</sup>

This passage clearly states that ER Chapter 8 is the update and does not reference any other document. TVA also notes that it does not know of any document requests that might be contemplated by the Petition. In any event, any document requests Petitioners may have made in other contexts would not be within the scope of this proceeding.

Comment 3 alleges that “the people of the TN Valley want a very different energy future than the one envisioned by TVA.”<sup>232</sup> Since this statement does not identify any issue regarding compliance with NRC requirements or criteria, it is also outside the scope of this proceeding and fails to allege a genuine issue of material law or fact.

Comment 4 alleges that “TVA does not even attempt to project a reasonable DSM forecast. This is clearly an inadequate analysis.”<sup>233</sup> The ER excerpt associated with this comment states that: (1) TVA initiated a program in 2007 to enhance its efforts to improve energy-efficiency, energy conservation, and peak demand reduction; (2) the ER provides a DSM forecast that does not include any projection of the effects of these, yet to be determined, enhancements; and (3) as the enhancements are developed they will be reflected in future planning.<sup>234</sup> The full context of this excerpt cited by the Petition is at ER page 9.2-6, and the ER also includes a similar statement in the discussion of need for power, at pages 8.2-8, 9. The Petition does not reference the ER’s discussion of the effects of DSM on the need for power

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<sup>231</sup> ER § 8.2 (emphasis added).

<sup>232</sup> Petition at 46.

<sup>233</sup> *Id.* at 47.

<sup>234</sup> *Id.*

forecast in the ER (*i.e.*, ER Section 8.2.2, “Factors Affecting Growth of Demand”<sup>235</sup>). In fact, that Section states that DSM programs have resulted in 496 MW of demand reduction since 1996.<sup>236</sup> Petitioners do not dispute that DSM has achieved such reductions in demand. Furthermore, the Petition does not provide a statement of facts or expert opinion which supports the assertion that TVA’s forecast is unreasonable or inadequate.<sup>237</sup> Thus, comment 4 does not meet the requirements of 10 C.F.R. § 2.309(f)(1)(v) and (vi) to provide credible support for this contention and to show that there is a genuine dispute on a material issue of fact or law.<sup>238</sup>

For the foregoing reasons, this contention does not provide a specific statement of an issue of law or fact to be raised, is outside the scope of this proceeding, is unsupported, and does not demonstrate that a genuine dispute exists. Therefore, the Board should reject this contention.

**10. Contention NEPA-D (Former Contention 10) - - No Action Alternative**

This contention has a heading that states: “TVA’s Power and Energy Requirements Forecast Fails to Evaluate Alternatives.”<sup>239</sup> Under this heading, the Petition identifies two issues: (1) the ER “does not adequately evaluate alternatives, including the no-action alternative and does not include any adverse information”<sup>240</sup>; and (2) “whether the Applicant has justified TVA’s need for power.”<sup>241</sup> The Petition points out that under 10 C.F.R. § 51.45, an ER must

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<sup>235</sup> ER at 8.2-5 to 8.2-11.

<sup>236</sup> *Id.* at 8.2-9.

<sup>237</sup> The thrust of Petitioners’ complaint appears to be that TVA has not speculated about the effect of plans that have not been developed. However, it is not permissible for a contention to criticize an ER for not accounting for a plan that has not yet been issued. *Vogtle*, LBP-07-3, 65 NRC at 271-72. More generally, it is well established under NEPA that environmental reviews need not evaluate “remote and speculative” possibilities. *See Vt. Yankee Nuclear Power Corp. v. Natural Res. Def. Council*, 435 U.S. 519, 551 (1978).

<sup>238</sup> *See Vogtle*, LBP-07-3, 65 NRC at 271-72 (rejecting a contention similar to Petitioners’ contention because, among other reasons, it failed to demonstrate that a genuine dispute exists).

<sup>239</sup> Petition at 47.

<sup>240</sup> *Id.*

<sup>241</sup> *Id.* at 48.

consider the “no action” alternative and must include negative information.<sup>242</sup> The Petition then provides an excerpt from the discussion of the no action alternative in the ER, and concludes that “[f]or energy supply, negative alternatives include efficiencies and demand-side management which will allow TVA to abandon the nuclear option at Bellefonte. Positive alternatives to nuclear power include solar, wind and other renewable sources of energy.”<sup>243</sup>

As demonstrated below, this contention should be dismissed because (1) it is unsupported, contrary to 10 C.F.R. § 2.309(f)(1)(v); and (2) it does not demonstrate that a genuine dispute exists, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

It is unclear whether this contention seeks to challenge the ER discussion of alternatives (ER Chapter 9) or its discussion of need for power (ER Chapter 8). Nevertheless, it is clear that this contention does not show that there is a genuine dispute with the Applicant on a material issue of fact or law related to either subject. First, this contention does not show that there is a genuine dispute about whether the ER evaluates alternatives adequately, including the no-action alternative. Although this contention references a specific portion of ER page 9.1-1, it does not identify any dispute with that portion of the ER, let alone provide supporting reasons for any such dispute.

This contention also fails to demonstrate that the ER (or any other part of the COL application) lacks any information required by law. Although this contention points out that an ER must consider the “no action” alternative, and it references the ER discussion of the “no action” alternative, the Petition does not provide any reasons to believe that the ER discussion is

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<sup>242</sup> *Id.*

<sup>243</sup> *Id.*

not adequate, especially given that NRC cases hold that discussion of the “no action” alternative can be brief and reference other ER sections.<sup>244</sup>

This contention also asserts that the ER does not include adverse information, but Petitioners do not identify any adverse information allegedly omitted. In fact, the ER provides an extensive discussion of adverse information. With respect to the “no action” alternative, the ER states: “Under the no-action alternative, the environmental impacts associated with the BLN project would not occur and electrical generation from the BLN project would not be available.”<sup>245</sup> ER Chapter 4, “Environmental Impacts of Construction,” and ER Chapter 5, “Environmental Impacts of Station Operation,” provide extensive discussion of the environmental impacts associated with the construction and operation of Bellefonte Units 3 and 4 as proposed (*i.e.*, the adverse impacts that would be avoided by the no-action alternative). ER Chapter 8, “Need for Power,” discusses the consequences if the electrical generation from Bellefonte Units 3 and 4 would not be available (*i.e.*, the adverse impacts that would result from the no-action alternative). The bare assertion in this contention that this discussion is inadequate is not supported by any tangible information, expert opinion, or substantive affidavits, contrary to 10 C.F.R. § 2.309(f)(1)(v).

Second, this contention also does not show that there is any dispute concerning TVA’s need for power forecast. In fact, this contention does not reference ER Chapter 8, “Need for Power,” identify any dispute concerning that chapter, or provide any statement of facts or expert opinion concerning TVA’s need for power analysis. Such information is required for a contention to raise an issue about need for power under 10 C.F.R. § 2.309(f)(1)(vi).

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<sup>244</sup> *Hydro Res., Inc.* (P.O. Box 15910 Rio Rancho, NM 87174), CLI-01-04, 53 NRC 31, 54 (2001); *Vogtle*, LBP-07-3, 65 NRC at 259-60.

<sup>245</sup> ER at 9.1-1.

Finally, although the issues and arguments in this contention focus on need for power and the no action alternative, the conclusion of this contention is a list of various energy supply alternatives.<sup>246</sup> This contention does not reference the discussion of these alternatives in ER Chapter 9, “Alternatives to the Proposed Action,” or provide any reason for disputing such discussion.

For the foregoing reasons, this contention is not properly supported and does not demonstrate that a genuine dispute exists. Therefore, the Board should reject this contention.

**11. Contention NEPA-E (Former Contention 11) - - Need for Power**

This contention alleges that TVA’s need for power analysis in ER Chapter 8 fails to justify the need for new generating capacity.<sup>247</sup> As demonstrated below, this contention should be dismissed because (1) it is not consistent with applicable legal standards governing analyses of need for power, contrary to 10 C.F.R. § 2.309(f)(1)(i); (2) it does not provide an adequate basis for its arguments that the ER should have considered certain events or conditions in the need for power analysis, contrary to 10 C.F.R. § 2.309(f)(1)(ii); (3) some of the issues raised in the contention are not material to a need for power analysis, contrary to 10 C.F.R. § 2.309(f)(1)(iv); (4) the contention is not properly supported with expert opinion or references, contrary to 10 C.F.R. § 2.309(f)(1)(v); and (5) the contention incorrectly alleges that the ER does not consider certain issues, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

This contention does not provide or reference any demand forecasts that are inconsistent with TVA’s analysis. Instead, this contention simply raises the possibility that future events might occur that could affect the results of TVA’s analysis, such as possible changes in legislation, possible changes in codes, possible increases in conservation and energy efficiency,

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<sup>246</sup> Petition at 48.

<sup>247</sup> *Id.* at 62.

and the like. However, in so arguing, this contention essentially ignores a long-established set of NRC cases governing need for power analyses.

In the leading case, *Niagara Mohawk Power Corp.* (Nine Mile Point Nuclear Station, Unit 2), ALAB-264, 1 NRC 347, 365-67 (1975), the Appeal Board held that “inherent in any forecast of future electric power demands is a substantial margin of uncertainty,” and therefore the applicant’s projection of future need should be accepted if it is “reasonable.” As the Appeal Board held in a later case:

[A] forecast that such need exists is not to be discarded as fatally flawed simply because the future course of events is sufficiently clouded to give rise to the possibility of a significant margin of error. Given the legal responsibility imposed upon a public utility to provide at all times adequate, reliable service – and the severe consequences which may attend upon a failure to discharge that responsibility – the most that can be required is that the forecast be a reasonable one in the light of what is ascertainable at the time made.<sup>248</sup>

This standard has been endorsed by the Commission. In *Carolina Power and Light Co.*, the Commission stated:

The Nine Mile Point rule recognizes that every prediction has associated uncertainty and that long-range forecasts of this type are especially uncertain in that they are affected by trends in usage, increasing rates, demographic changes, industrial growth or decline, the general state of the economy, etc. These factors exist even beyond the uncertainty that inheres to demand forecasts: assumptions on continued use from historical data, range of years considered, the area considered, extrapolations from usage in residential, commercial, and industrial sectors, etc.<sup>249</sup>

Similarly, the Appeal Board in *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-355, 4 NRC 397, 410 (1976) ruled that an applicant’s load forecasts

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<sup>248</sup> *Kan. Gas & Elec. Co.* (Wolf Creek Generating Station, Unit No. 1), ALAB-462, 7 NRC 320, 328 (1978).

<sup>249</sup> *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), CLI-79-5, 9 NRC 607, 609-10 (1979).

are [not] automatically suspect because they are inclined to be “conservative,” that is to say they tend to project future loads closer to the high than to the low end of the demand spectrum. To be sure, if demand does turn out to be less than predicted it can be argued (as intervenor does) that the cost of the unneeded generating capacity may turn up in the customers’ electric bills. . . . But should the opposite occur and demand outstrip capacity, the consequences are far more serious.

In contrast to this well-settled line of cases, this contention essentially argues that there is uncertainty in TVA’s forecasts because future conditions might be different than current conditions. However, as the above cases have held, such uncertainty is inherent in demand forecasts, and is not a sufficient legal basis for rejecting the forecasts. Since this contention does not provide any basis for believing that TVA’s forecasts are unreasonable, the contention should be rejected.

Additionally, contrary to 10 C.F.R. § 2.309(f)(1)(v), the contention does not provide a concise statement of facts or expert opinion, together with references to the specific sources and documents. In particular, the contention is approximately 14 pages long, and contains numerous allegations, almost none of which have any references to expert opinion or other sources. For example, the Petition contends that TVA’s price of electricity will continue to rise, and that TVA’s wholesale prices are no longer competitive.<sup>250</sup> However, the Petition provides no reference or expert opinion to support such allegations. As the Commission has ruled, a contention “will be ruled inadmissible if the petitioner ‘has offered no tangible information, no experts, no substantive affidavits,’ but instead only ‘bare assertions and speculation.’”<sup>251</sup>

In a few cases, Petitioners attempt to provide references. However, the references are so vague as to be meaningless (*e.g.*, references to “TN Department of Health”; “US Census

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<sup>250</sup> Petition at 50.

<sup>251</sup> *Fansteel*, CLI-03-13, 58 NRC at 203 (quoting *GPU Nuclear*, CLI-00-6, 51 NRC at 208).

Report”; “LIHEAP”).<sup>252</sup> Such vague references to documents do not suffice—Petitioners must identify specific portions of the documents on which they rely.<sup>253</sup>

Second, contrary to 10 C.F.R. § 2.309(f)(1)(ii), Petitioners have not provided any basis for many of their statements in this contention. Instead, the contention essentially engages in speculation. For example,

- The Petition contends that TVA should consider economic growth in the ranges of 0.1% to 2.7%, recessionary conditions, high inflation, cessation of operation by TVA’s major customers, and exhaustion of the supplies of bauxite.<sup>254</sup> However, the contention provides no basis for postulating such conditions or any reason to believe that such conditions will persist over the time frame in question (*i.e.*, through 2017-2018 when Bellefonte Units 3 and 4 are expected to enter commercial operation). Furthermore, as other licensing boards have held, economic recessions are a cyclical factor, and when and how serious they may be is impossible to know. Therefore, need for power analyses must be based upon historical patterns of growth.<sup>255</sup>
- The Petition claims that TVA has not considered the “Congressional requirement for utilities to adopt Renewal [sic] Portfolio Standards of 15%.”<sup>256</sup> However, the Petition provides no citation for such a requirement. If Petitioners are referring to a bill that was offered in Congress last year, it was not enacted.<sup>257</sup> Similarly, the Petition argues that

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<sup>252</sup> Petition at 53-54.

<sup>253</sup> *Seabrook*, CLI-89-03, 29 NRC at 240-41.

<sup>254</sup> Petition at 49-50, 52, 56, 63.

<sup>255</sup> *See, e.g., Duke Power Co.* (William B. McGuire Nuclear Station, Units 1 and 2), LBP-79-13, 9 NRC 489, 499 (1979), *aff’d*, ALAB-669, 15 NRC 453 (1982).

<sup>256</sup> Petition at 55.

<sup>257</sup> Congress did consider such a requirement last year, but it was not enacted. *See, e.g., To Amend Title VI of the Public Utility Regulatory Policies Act of 1978 to Establish a Federal Renewable Energy Portfolio Standard for Certain Retail Electric Utilities, and for Other Purposes*, H.R. 969, 110th Cong. (2007).

TVA should account for “the inevitable Congressional mandated improvements in appliance and equipment standards.”<sup>258</sup> However, it is not possible to provide a meaningful evaluation of need for power based upon vague, unspecific claims as to what Congress might do in the future.

- The Petition alleges that TVA has not accounted for the development of the Tennessee Energy Plan announced by an Executive Order by Governor Bredesen.<sup>259</sup> However, that Executive Order, which was issued in March of 2008, merely establishes a Task Force to develop a plan.<sup>260</sup> No such plan exists. Petitioners do not explain how TVA’s need for power analysis can consider a plan that does not exist. As the licensing board recently ruled in *Vogtle* in rejecting a contention submitted by some of the same Petitioners, “[t]he fact that a new analysis is being prepared, taken alone, does not provide support for the claim that the [need for power] analysis in the ER is flawed.”<sup>261</sup>
- The Petition argues that TVA should consider events that might occur in the future, such as technological breakthroughs, possible improvements in energy efficiency, and government legislation and subsidies.<sup>262</sup> However, the contention provides no basis for postulating such conditions. Furthermore, such assertions are so vague that they do not provide TVA and NRC with adequate notice as to what Petitioners want to litigate. For example, Petitioners do not identify the “technical breakthroughs,” do not identify when

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<sup>258</sup> Petition at 56-57, 60, 63.

<sup>259</sup> *Id.* at 60.

<sup>260</sup> State of Tennessee Executive Order 54, *An Order Establishing the Governor’s Task Force on Energy Policy* (Mar. 19, 2008).

<sup>261</sup> *Vogtle*, LBP-07-3, 65 NRC at 272.

<sup>262</sup> Petition at 56-57.

such breakthroughs may occur, and do not specify what the likely impact of such breakthroughs will be on power demand.

As the Commission has previously stated, a contention is inadmissible if it offers “no tangible information, no experts, no substantive affidavits,’ but instead only ‘bare assertions and speculation.’”<sup>263</sup> Since this contention runs afoul of the Commission’s admonition, it should be rejected.

Third, contrary to 10 C.F.R. § 2.309(f)(1)(iv), the contention does not demonstrate that the issues raised are material to the need for power. In general, the contention consists of nothing more than a string of statements alleging that TVA should have considered a particular issue in its need for power analysis, without any demonstration that such a consideration would materially affect the results of TVA’s analysis. For example:

- The Petition alleges that, in 2007 and the first quarter of 2008 (which encompass periods after the Bellefonte COL application was filed in October 2007), TVA’s actual sales of power fell below its forecasts.<sup>264</sup> However, such short term differences between predicted and actual demand are not material to a long term need for power analysis.<sup>265</sup>

As stated by the Appeal Board in *Duke Power Co.*:

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<sup>263</sup> *Fansteel*, CLI-03-13, 58 NRC at 203 (quoting *GPU Nuclear*, CLI-00-6, 51 NRC at 208).

<sup>264</sup> Petition at 52-53.

<sup>265</sup> Petitioners do not cite a reference for their allegations, so specifically correcting any misunderstanding by the Petitioners regarding TVA power sales is not possible. However, Petitioners may be referring to information released in TVA’s Fiscal Year (“FY”) 2007 Annual Report on Form 10-K (“FY 2007 10-K”) filed with the U.S. Securities and Exchange Commission (“SEC”). In its FY 2007 10-K, TVA reports that electricity sales for FY 2007 were 174.810 GWh, while FY 2006 electricity sales were 176.370 GWh. FY 2007 10-K, page 63. The reduction is explained on the same page of the FY 2007 10-K and in a referenced note as resulting from the implementation of a change in September 2006 in the methodology for estimating unbilled revenue for electricity sales. The document explicitly explains that the numbers do not indicate that customer usage was less in 2007, but only that TVA’s accounting changed.

Furthermore, these numbers are not the numbers that TVA would use for projecting power requirements in the future. The power sales figures included in TVA’s financial reports represent the power TVA actually sold during a given period. The amount of power TVA sells, of course, varies with weather conditions. In planning future power requirements, TVA uses “weather normalized” sales, which predict TVA’s power sales based on

What intervenor attempted in essence is to rest a long term forecast of applicant's peak load demands on changes which took place in the last two years. But, "given the fluctuating nature of the growth of electric power demand, forecasts based on short time periods may be overly influenced by transitory effects and thus not accurately reflect basic long-term trends."<sup>266</sup>

- The Petition alleges that TVA should evaluate the high cost of oil.<sup>267</sup> However, the cost of oil is not one of the factors that needs to be considered in an evaluation of need for power, as listed in the NRC's Environmental Standard Review Plan ("ESRP"), NUREG-1555, Section 8.2. Furthermore, the contention does not attempt to demonstrate (or even allege) that a high cost of oil will affect the need for power as determined by TVA. In that regard, a high cost of oil may actually increase the demand for electricity, as consumers switch from oil to electricity. Since Petitioners have not provided any reason to believe that a high cost of oil may significantly impact the results of TVA's need for power analysis, this allegation is not admissible.
- The Petition contends that TVA does not account for congressionally mandated carbon tariffs.<sup>268</sup> Even if it is assumed that Congress eventually enacts such tariffs, the contention does not attempt to demonstrate (or even allege) that such tariffs will materially affect the need for power as determined by TVA. In that regard, such tariffs could actually increase the demand for electricity in TVA's service area, because TVA generates a relatively large amount (about 40%) of its electricity from non-fossil-fueled plants - - approximately 10% of its power from hydroelectric stations and 30% from

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"normal" weather conditions. Using these figures, TVA's native system load grew at an annual average of 2.1% during the period 2000 to 2006. From 2006 to 2007, TVA's weather normalized native system load grew 2.6%.

<sup>266</sup> *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-355, 4 NRC 397, 410 (1976) (citations omitted).

<sup>267</sup> Petition at 49-50.

<sup>268</sup> *Id.* at 51, 56.

nuclear plants.<sup>269</sup> Because Petitioners have not provided any reason to believe that a carbon tariff may significantly impact the results of TVA's need for power analysis, this issue is not material and does not provide an adequate basis for the contention.

- The Petition provides a number of allegations regarding the distribution of income among households in Tennessee.<sup>270</sup> However, the Petition does not explain the import of those statements, nor does it demonstrate or even allege that such factors are not adequately addressed in the need for power analysis prepared by TVA.
- The Petition states that TVA has not determined the effect of an aging population on the rate of growth of electricity demand.<sup>271</sup> However, the aging population is not one of the factors that must be considered in an evaluation of need for power, as listed in ESRP Section 8.2. Furthermore, the contention does not attempt to demonstrate (or even allege) that an aging population will affect the need for power as determined by TVA. In that regard, an aging population may actually increase the demand for electricity, because older age groups tend to have higher incomes. Because Petitioners have not provided any reason to believe that an aging population may significantly impact the results of TVA's need for power analysis, this allegation is not admissible.

Fourth, Petitioners have based the contention upon mischaracterizations of the Application, contrary to 10 C.F.R. § 2.309(f)(1)(vi). For example:

- The Petition implies that TVA has based its need for power analysis on peak power demand, rather than energy needs.<sup>272</sup> To the contrary, as is clearly stated in TVA's ER,

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<sup>269</sup> TVA: Power System, <http://www.tva.gov/power/index.htm>.

<sup>270</sup> Petition at 53-54.

<sup>271</sup> *Id.* at 61.

<sup>272</sup> *Id.* at 51.

“TVA determined how much of the total capacity need . . . should be baseload generation based on an assessment of energy needs.”<sup>273</sup>

- The Petition alleges that TVA should have assumed rates of growth in the Gross Regional Product (“GRP”) that are less than 2.8%.<sup>274</sup> In fact, TVA postulated three scenarios, one of which used a growth in GRP of 1.0% to 1.5%.<sup>275</sup>
- The Petition alleges that TVA does not estimate employment by major industries by Standard Industrial Code (“SIC”) code and personal income.<sup>276</sup> In fact, as discussed on page 8.2-2 of the ER, TVA did estimate electricity demand for the residential sector using population and income and the electricity demand for the commercial and industrial (“C&I”) sector using SIC codes and employment.
- The Petition alleges that TVA has not estimated the importance of energy efficiency, substitution, and DSM, and forecasts no energy efficiency savings.<sup>277</sup> In fact, TVA devotes two entire sections of the need for power analysis to this topic.<sup>278</sup> As indicated in the ER,<sup>279</sup> DSM programs have resulted in 496 MW of demand reduction since 1996.
- The Petition alleges that TVA has not considered ground source heat pumps to replace conventional air-conditioning.<sup>280</sup> In fact, the ER specifically discusses replacement of

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<sup>273</sup> ER at 8.4-2.

<sup>274</sup> Petition at 52.

<sup>275</sup> ER at 8.2-17.

<sup>276</sup> Petition at 53.

<sup>277</sup> *Id.* at 51, 55-58, 60.

<sup>278</sup> ER §§ 8.2.2.2 and 8.2.2.3.

<sup>279</sup> *Id.* at 8.2-9.

<sup>280</sup> Petition at 55, 57, 60.

room air conditioning by heat pumps<sup>281</sup> and TVA's programs for assisting customers to install geothermal heat pumps.<sup>282</sup>

- The Petition alleges that TVA has not considered trends in electricity prices in forecasts of electricity growth rates.<sup>283</sup> In fact, ER Section 8.2.2.3 is devoted to the impacts of the price and rate structure on electricity demand.<sup>284</sup>
- The Petition contends that TVA has not considered recent increases in electricity prices.<sup>285</sup> However, that argument is inconsistent with the statement on page 8.2-7 of the ER, which states that the real prices of electricity increased in 2004 – 2006 (which were the most recent years available prior to submission of the Application in 2007).
- The Petition alleges that TVA has not considered the impact of milder than usual weather on historic power demand.<sup>286</sup> However, the ER discusses how TVA has adjusted historic power demands to account for the weather.<sup>287</sup>
- The Petition alleges that TVA has not considered the effects of alternative price structures for electricity.<sup>288</sup> In fact, ER Section 8.2.2.3 is devoted to that topic.

As has been previously held, a petitioner's imprecise reading of a document cannot be the basis for a litigable contention.<sup>289</sup> In particular, if a petitioner submits a contention of omission, but the allegedly missing information is indeed in the license application, then the contention

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<sup>281</sup> ER at 8.2-7.

<sup>282</sup> *Id.* at 8.2-9 and 10.

<sup>283</sup> Petition at 55-56.

<sup>284</sup> *See also* ER at 8.2-2.

<sup>285</sup> Petition at 50, 56.

<sup>286</sup> *Id.* at 56.

<sup>287</sup> ER at 8.2-3.

<sup>288</sup> Petition at 58-59.

<sup>289</sup> *See Georgia Tech*, LBP-95-6, 41 NRC at 300.

does not raise a genuine issue.<sup>290</sup> Since large portions of this contention are based upon a mischaracterization or a misunderstanding of the Application, or a combination of both, the contention should be rejected.

Fifth, contrary to 10 C.F.R. § 2.309(f)(1)(i), parts of the contention do not provide a specific statement of fact or law to be raised or controverted. For example, pages 61-63 of the Petition merely question whether TVA's analysis of power supply has considered certain power sources, such as wind and solar power, and self-generation and net metering. It does not allege any actual deficiency in TVA's analysis. As the Commission has held, the contention rules "bar contentions where petitioners have only 'what amounts to generalized suspicions.'"<sup>291</sup> In any event, ER Section 9.2 does consider alternative power sources, including wind and solar power, and pages 9.2-11 and 9.2-13 discuss self-generation and net-metering, including an estimate of the power to be generated from such sources.

Finally, Petitioners contend that the NRC must exercise oversight over TVA's power demand forecasts and rates.<sup>292</sup> However, the NRC has no statutory jurisdiction to oversee TVA's power demand forecasts or rates. Under the provisions of the TVA Act, TVA's Board of Directors is responsible for establishing TVA's electricity rates,<sup>293</sup> and the rates set by the TVA Board pursuant to the authority of the TVA Act are not subject to review.<sup>294</sup> Instead, NRC's obligations under NEPA are simply to prepare an Environmental Impact Statement ("EIS"), which will include a need for power analysis.<sup>295</sup>

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<sup>290</sup> See *Turkey Point*, LBP-90-16, 31 NRC at 521 & n.12.

<sup>291</sup> *McGuire*, CLI-03-17, 58 NRC at 424 (quoting *Oconee*, CLI-99-11, 49 NRC at 337-39).

<sup>292</sup> Petition at 61.

<sup>293</sup> 16 U.S.C. § 831a(g)(1)(L).

<sup>294</sup> See, e.g., *Mobil Oil Corp. v. TVA*, 387 F. Supp. 498, 506-08 (N.D. Ala. 1974).

<sup>295</sup> See 10 C.F.R. § 51.75 and 10 C.F.R. Part 51, App. A(4).

In summary, this contention essentially consists of nothing more than unsupported allegations, speculation, and mischaracterizations of the Bellefonte ER. The contention argues that TVA's need for power analysis should have considered a number of factors, but does not cite the myriad sections in the ER where the factors were discussed, never demonstrates that such a consideration would have any material effect on the results of the analysis, and never alleges that TVA's analysis is unreasonable. For the foregoing reasons, this contention does not provide a specific statement of law or fact, does not provide an adequate basis, is immaterial, is not properly supported, and does not demonstrate that a genuine dispute exists. Therefore, the Board should reject this contention.

**12. Contention NEPA-F (Former Contention 12) - - NRC's Evaluation of Need for Power**

This contention alleges that: "NRC failed to justify need for new units."<sup>296</sup> Additionally, Petitioners conclude: "As no other entity with [sic] the TN Valley or within the federal government has the responsibility to review and determine the adequacy of TVA's power and energy requirement forecasts, it clearly becomes the responsibility of the NRC to review the adequacy of TVA's claims that the proposed Bellefonte units are needed."<sup>297</sup>

Petitioners begin this contention by stating: "In view of the foregoing contention regarding TVA's failure to justify its COL request, it is left to NRC to provide justification for the proposed units at Bellefonte."<sup>298</sup> As discussed in TVA's response above to Contention NEPA-E (former Contention 11), that contention is deficient and not admissible. Therefore, this contention likewise must be rejected because it is conditioned upon Contention NEPA-E (former Contention 11).

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<sup>296</sup> Petition at 63.

<sup>297</sup> *Id.* at 65.

<sup>298</sup> *Id.* at 63.

Additionally, as demonstrated below, this contention should be dismissed because (1) it is vague and does not provide a specific statement of the issue, contrary to 10 C.F.R.

§ 2.309(f)(1)(i); and (2) it does not demonstrate that a genuine material dispute exists with respect to the Application, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

Petitioners' vague, confusing statement that "NRC failed to justify need for new units" does not identify a specific issue to be litigated. It is neither specific nor does it raise or controvert an issue of law or fact. Therefore, the contention is not admissible under 10 C.F.R. § 2.309(f)(1)(i).

The remaining statements made by Petitioners in this contention likewise fail to provide a clear statement of the issue. Petitioners provide statements such as "it is left to NRC to provide justification for the proposed units at Bellefonte" and because no one has the responsibility for reviewing TVA's energy forecasts, "it clearly becomes the responsibility of the NRC to review the adequacy of TVA's claims that the proposed Bellefonte units are needed."<sup>299</sup> In essence, Petitioners appear to be contending that NRC is obliged to oversee decisions made by the TVA Board with respect to TVA's rates and the decision to apply for COLs.<sup>300</sup> However, Petitioners' statements do not identify any legal bases for NRC to oversee TVA's decisions related to rates or similar matters. Thus, Petitioners do not satisfy the requirement that an "admissible contention must explain, with specificity, particular safety or legal reasons requiring a rejection of the contested [application]."<sup>301</sup>

This contention should also be dismissed because Petitioners have not shown "that a genuine dispute exists with the applicant/licensee on a material issue of law or fact," contrary to

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<sup>299</sup> *Id.* at 63, 65.

<sup>300</sup> *Id.* at 63-64.

<sup>301</sup> *Millstone*, CLI-01-24, 54 NRC at 359-60.

10 C.F.R. § 2.309(f)(1)(vi). In fact, TVA agrees with Petitioners' conclusion that it is "the responsibility of the NRC to review the adequacy of TVA's claims that the proposed Bellefonte units are needed."<sup>302</sup> The NRC regulations require the NRC to review the information provided by TVA regarding the need for the two new units. For example, Appendix A(4) of 10 C.F.R. Part 51 addresses the "[p]urpose of and need for action," and requires that the EIS "briefly describe and specify the need for the proposed action."<sup>303</sup> Petitioners have requested nothing different than what NRC is already required to do later in this proceeding. However, at this stage of the proceeding, the Petitioners must focus their contentions on the ER, and not the future evaluations of the NRC staff.<sup>304</sup> Therefore, this contention must fail.

For the foregoing reasons, this contention is vague and does not provide a specific statement of the issue, and does not demonstrate that a genuine material dispute exists with respect to the Application. Therefore, the Board should reject this contention.

**13. Contention MISC-F (Former Contention 13) - - Disposal of Low Level Waste**

This contention<sup>305</sup> alleges that the Application fails to offer a viable plan for disposal of low-level radioactive waste ("LLRW") because, after June 30, 2008, the disposal facility in Barnwell, South Carolina will no longer accept Class B and Class C LLRW that is generated outside the Atlantic Compact Commission States of Connecticut, New Jersey, and South

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<sup>302</sup> Petition at 65.

<sup>303</sup> See also 10 C.F.R. § 51.45(b)(3) (requiring an ER to address "[a]lternatives to the proposed action," which would include the no-action alternative and consideration of the need for the new units); NUREG-1555, Ch. 8.

<sup>304</sup> See 10 C.F.R. § 2.309(f)(2).

<sup>305</sup> Although Petitioners label this contention as a "MISC" contention in their Supplemental Petition, they also indicate it has NEPA and FSAR implications. Supplemental Petition at 4. However, Petitioners failed to follow the Board's instructions, which required Petitioners to "set forth the contention and supporting bases in full separately for each category into which it is asserted to fall." Initial Prehearing Order at 3.

Carolina.<sup>306</sup> Petitioners claim that Bellefonte is required to obtain a 10 C.F.R. Part 61 license for land disposal of radioactive waste because, without access to the Barnwell facility, “site storage becomes *de facto* onsite disposal.”<sup>307</sup> As support for this contention, Petitioners assert that it is “imperative that safety and security issues” of extended storage of LLRW be addressed given that this waste is the “hottest, most concentrated waste in the category.”<sup>308</sup>

As demonstrated below, this contention should be dismissed because it is premised on an erroneous interpretation of the applicable statutory and regulatory provisions and impermissibly challenges NRC regulations, contrary to 10 C.F.R. § 2.309(f)(1)(iii).

Petitioners are legally incorrect in maintaining that the Bellefonte facility is required to be licensed as a land disposal facility pursuant to 10 C.F.R. Part 61. For purposes of the Low-Level Radioactive Waste Policy Act of 1985, as amended (“LLRWPA”), the term “disposal” is defined as “the permanent isolation of [LLRW] pursuant to the requirements established by the [NRC] under applicable laws.”<sup>309</sup> ER Section 3.5.3 explicitly states that Bellefonte will not be disposing of LLRW onsite. Furthermore, by their own terms Part 61 licenses are limited to waste “received from other persons,”<sup>310</sup> and therefore are not applicable to the situation postulated by Petitioners. Nor are Petitioners able to point to any authority that supports their

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<sup>306</sup> Petition at 65-66.

<sup>307</sup> *Id.* at 67-69.

<sup>308</sup> *Id.* at 67. In addition, this contention incorrectly claims that “radioactive waste management is barely addressed” in ER Section 3.5. *Id.* ER Section 3.5.3 provides details of the solid radioactive waste management system, including cross-references to the DCD that provide the estimated volumes of solid radioactive waste and the expected principal radionuclides in primary and secondary wastes. Accordingly, Petitioners’ inaccurate characterization of the ER does not demonstrate that this contention raises a genuine issue of material fact for purposes of satisfying 10 C.F.R. § 2.309(f)(1)(vi). Also, Table S-3 in 10 C.F.R. Part 51 indicates that LLRW will be disposed of through shallow land burial and finds that there will be no significant radiological effluent to the environment resulting from the disposal. In accordance with 10 C.F.R. § 51.51, the Bellefonte ER uses Table S-3 to estimate the environmental impacts of LLRW disposal. ER Table 5.7.2 (Sheet 6). Therefore, the environmental impacts of LLRW disposal are properly addressed in the ER.

<sup>309</sup> 42 U.S.C. § 2021b(7).

<sup>310</sup> 10 C.F.R. § 61.1(a); *see also ShieldAlloy Metallurgical Corp.* (Licensing Amendment Request for Decommissioning of Newfield, N.J. Facility), LBP-07-5, 65 NRC 341, 362 (2007).

theory that TVA's onsite storage of LLRW otherwise requires a 10 C.F.R. Part 61 license.

Accordingly, Petitioners are mistaken in their belief that the Bellefonte facility must be licensed under 10 C.F.R. Part 61.

Moreover, NRC guidance documents further contradict Petitioners' unsupported claim that the Bellefonte COL application is required to address the "safety and security issues of extended onsite storage."<sup>311</sup> Numerous NRC guidance documents indicate that it is appropriate for a plant to retain flexible interim storage procedures until disposal sites are developed or otherwise become available. For example, Section 11.4 of NUREG-0800, Standard Review Plan ("SRP") for the Review of Safety Analysis Reports for Nuclear Power Plants, recognizes that a facility need not be initially designed to store waste for its entire operational life:

In considering expanded storage capacity, licensees should consider the design and construction of additional volume reduction facilities (e.g., trash compactors, shredders, incinerators, etc.), *as necessary*, and then process wastes that may have been stored during their construction. Regional State low-level waste compacts and unaffiliated States may establish new or additional low-level waste disposal sites in the future under 10 CFR Part 61 or equivalent State regulations.<sup>312</sup>

Section 11.4 of the SRP also endorses the guidance provided in Generic Letter 81-38.<sup>313</sup> Generic Letter 81-38 emphasizes that "it is important that the NRC not take deliberate action that would hinder the establishment of additional disposal capacity by the states and yet, consistent with NRC regulatory safety requirements, permit necessary operational flexibility by its licensees."<sup>314</sup>

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<sup>311</sup> Petition at 67.

<sup>312</sup> NUREG-0800, Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants, at 11.4-26 (Mar. 2007).

<sup>313</sup> *Id.* at 11.4-26 (endorsing NRC Generic Letter 81-38, Storage of Low-Level Radioactive Wastes at Power Reactor Sites (Nov. 10, 1981)).

<sup>314</sup> Generic Letter 81-38, at 1.

Petitioners' contention that individual reactor applicants should dispose of LLRW onsite would create just such a hindrance.

With respect to the Barnwell facility restrictions specifically, the NRC recently issued a Regulatory Information Summary ("RIS") 2008-12 to licensees. The RIS acknowledges the closing of Barnwell to producers of LLRW outside of the Compact states. Nevertheless, the RIS does not require that such producers seek a license pursuant to Part 61. Instead, the RIS indicates that extended interim storage of LLRW may be appropriate and listed the following consideration:

Given the uncertainties regarding disposition alternatives for some LLRW, it may not be practical to establish a specific time limit for retention of LLRW in extended interim storage. However, the NRC recognizes that it is prudent practice to move LLRW from storage to permanent disposal/disposition as quickly as is practicable. Licensees storing LLRW are encouraged to develop and maintain a strategy and timeline for disposition and/or disposal of LLRW in their possession. Different strategies and timelines may be appropriate for waste streams having or requiring different disposition pathways. Waste streams for which the licensee can identify no foreseeable disposition pathway should be specifically acknowledged.<sup>315</sup>

NRC guidance documents are entitled to considerable weight,<sup>316</sup> especially considering that Petitioners fail to provide supporting reasons for their belief that the Bellefonte Application must request a Part 61 license for LLRW disposal. Adopting Petitioners' view—which would essentially require that every nuclear power facility not located in Connecticut, New Jersey, or South Carolina obtain a disposal license under 10 C.F.R. Part 61—would hinder the development of additional disposal sites and reduce operational flexibility, contrary to established NRC

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<sup>315</sup> NRC Regulatory Issue Summary 2008-12, Consideration for Extended Interim Storage of Low-Level Radioactive Waste by Fuel Cycle and Materials Licensees, at 4 (May 9, 2008) (ADAMS Accession No. ML073330725).

<sup>316</sup> See, e.g., *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-900, 28 NRC 275, 290 (1988); *Consumers Power Co.* (Big Rock Point Nuclear Plant), ALAB-725, 17 NRC 562, 568 (1983).

policy. More importantly, Petitioners have not pointed to any NRC safety regulations that would impose such a requirement. Accordingly, Petitioners fail to propose an admissible contention because they fail to show that TVA must obtain a 10 C.F.R. Part 61 license.<sup>317</sup>

For the foregoing reasons, this contention is premised on an erroneous interpretation of the applicable statutory and regulatory provisions and impermissibly challenges NRC regulations. Therefore, the Board should reject this contention.

**14. Contention NEPA-L (Former Contention 14) - - Attacks on NRC's Waste Confidence Rule**

In this contention, Petitioners assert that the environmental impacts of disposal of spent fuel must be evaluated before issuance of a COL because the Waste Confidence Rule does not apply in this proceeding.<sup>318</sup> To support their claim regarding the inapplicability of the Waste Confidence Rule, Petitioners maintain that the Rule does not apply to new reactors because it does not express confidence that a second geologic repository will be available.<sup>319</sup> Petitioners argue that, even if the Waste Confidence Rule applies in this proceeding, then it should be

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<sup>317</sup> Petitioners also attempt to raise safety issues related to the FSAR's description of the solid waste management system process control program ("PCP"). However, Petitioners fail to controvert any material issue with respect to that program. As support for this contention, Petitioners quote a portion of FSAR Section 11.4.6 and claim there is only a "perfunctory discussion" of the PCP. Petition at 68. This contention ignores other pertinent information in the FSAR, including Section 11.4.6.1 (discussing operating procedures), Section 11.4.6.2 (addressing third party waste processors' PCPs), and the adoption of NEI-07-10 (providing guidance on PCP descriptions). Petitioners also suggest that there is a problem with the FSAR description of the PCP because it states that operating procedures will rely on waste acceptance criteria ("WAC") for a yet to be determined disposal site. *Id.* However, this contention ignores provisions in the FSAR which state that those procedures will require "periodic review and revision, as necessary . . . based on changes to the disposal site, WAC regulations, and third party PCPs." FSAR at 11.4-2. Accordingly, Petitioners' incomplete characterization of the FSAR does not demonstrate a genuine issue of material fact for purposes of satisfying 10 C.F.R. § 2.309(f)(1)(vi). Furthermore, Petitioners' assertion that the FSAR must note that LLRW "could be returned to Bellefonte, under certain circumstances" (Petition at 68), ignores the description of the PCP in the FSAR, which indicates that procedures "specify the process for packaging, shipment, material properties (for disposal or further processing), testing to verify compliance, the process to address non-conforming materials, and required documentation." FSAR at 11.4-2.

<sup>318</sup> Petition at 69-75.

<sup>319</sup> *Id.*

reconsidered because the increased threat of a terrorist attack raises substantial doubt about the continuing validity of the Waste Confidence findings.<sup>320</sup>

As demonstrated below, this contention should be dismissed because it is not within the scope of this proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii), and it fails to satisfy the requirements for waiver of a regulation as set forth in 10 C.F.R. § 2.335(b).

This contention represents an impermissible challenge to NRC's Waste Confidence Rule in 10 C.F.R. § 51.23. Section 51.23 plainly states:

The Commission has made a generic determination that, if necessary, spent fuel generated in *any reactor* can be stored safely and without significant environmental impacts for at least 30 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of that reactor at its spent fuel storage basin or at either onsite or offsite independent spent fuel storage installations. Further, the Commission believes there is reasonable assurance that at least one mined geologic repository will be available within the first quarter of the twenty-first century, and sufficient repository capacity will be available within 30 years beyond the licensed life for operation of *any reactor* to dispose of the commercial high-level waste and spent fuel originating in such reactor and generated up to that time.<sup>321</sup>

The Commission has clearly stated that it has confidence that waste generated by “any reactor” will be safely managed. Moreover, the regulatory history of the Waste Confidence Rule demonstrates an intention to cover new reactors. Specifically, the Commission noted that it believes that, “if the need for an additional repository is established, Congress will provide the needed institutional support and funding, as it has for the first repository.”<sup>322</sup> Furthermore, the Commission found that “[t]he availability of a second repository would permit spent fuel to be shipped offsite well within 30 years after the expiration of these reactors’ [operating licenses].

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<sup>320</sup> *Id.* at 75-78.

<sup>321</sup> 10 C.F.R. § 51.23(a) (emphasis added).

<sup>322</sup> Review and Final Revision of Waste Confidence Decision, 55 Fed. Reg. 38,474, 38,502 (Sept. 18, 1990).

The same would be true of the spent fuel discharged from any new generation of reactor designs.”<sup>323</sup> The Commission clearly reaffirmed its 1990 findings in a 1999 Status Report on the Waste Confidence Decision.<sup>324</sup>

This contention is essentially identical to contentions rejected by licensing boards in other proceedings.<sup>325</sup> Importantly, the NRC even amended the Waste Confidence Rule in 2007 to clarify that the rule encompasses COL applications.<sup>326</sup> Therefore, in light of the plain language of the rule and its regulatory history, the Waste Confidence Rule applies to this proceeding and this contention is an impermissible challenge to the Rule.

In addition, to the extent that it challenges the environmental impacts of the management of high-level radioactive waste, this contention represents an impermissible challenge to Table S-3 of 10 C.F.R. § 51.51. Commission regulations require that a COL ER use the values in Table S-3 as the basis for assessing the environmental impacts of the management of high-level waste.<sup>327</sup> Table S-3 indicates that high-level waste will be disposed of through deep burial and at a federal repository. In accordance with 10 C.F.R. § 51.51, the Bellefonte ER uses Table S-3 to discuss the environmental impacts of high-level waste.<sup>328</sup> Petitioners attempt to attack Table S-3

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<sup>323</sup> *Id.* at 38,503-04.

<sup>324</sup> See Status Report on the Review of the Waste Confidence Decision, 64 Fed. Reg. 68,005, 68,007 (Dec. 6, 1999) (“These considerations confirm and strengthen the Commission’s 1990 findings and lead the Commission to conclude no significant and unexpected events have occurred – no major shifts in national policy, no major unexpected institutional developments, no unexpected technical information – that would cast doubt on the Commission’s Waste Confidence findings or warrant a detailed reevaluation at this time.”).

<sup>325</sup> See *Vogtle*, LBP-07-3, 65 NRC at 267-68; *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), LBP-04-17, 60 NRC 229, 246-47 (2004); *Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), LBP-04-18, 60 NRC 253, 268-70 (2004); *Sys. Energy Res., Inc.* (Early Site Permit for Grand Gulf ESP Site), LBP-04-19, 60 NRC 277, 296-97 (2004).

<sup>326</sup> Final Rule, Licenses, Certifications, and Approvals for Nuclear Power Plants, 72 Fed. Reg. 49,352, 49,429 (Aug. 28, 2007) (“The NRC is revising §§ 51.23(b) and (c) to indicate that the provisions of these paragraphs also apply to combined licenses.”).

<sup>327</sup> See 10 C.F.R. § 51.51(a).

<sup>328</sup> ER Table 5.7-2 (Sheet 6). The Petitioners fail to controvert this portion of the ER, flouting the requirements of 10 C.F.R. § 2.309(f)(1)(vi).

by questioning whether high-level waste from Bellefonte Units 3 and 4 will be disposed of through deep burial at a federal repository.<sup>329</sup> Therefore, this contention is outside the scope of this proceeding because, absent a waiver, “no rule or regulation of the Commission . . . is subject to attack by way of discovery, proof, argument, or others means in any adjudicatory proceeding.”<sup>330</sup>

Petitioners have not submitted a petition for waiver of the Waste Confidence Rule pursuant to 10 C.F.R. § 2.335(b) with the required supporting affidavit, nor have they addressed the required four-part *Millstone* test for Section 2.335 petitions.<sup>331</sup> However, even if their request to “reconsider” the Waste Confidence Rule is treated as a request for waiver, Petitioners would fail to meet their burden to demonstrate the existence of “special circumstances” because Petitioners have failed to state any unique circumstances relating to the Bellefonte facility that would justify waiving the applicable regulation. The Commission has stated unambiguously that “[w]aiver of a Commission rule is simply not appropriate for a generic issue.”<sup>332</sup> In addition, the Declaration by Dr. Arjun Makhijani would not satisfy the affidavit requirements for such a petition, as it fails to “state with particularity the special circumstances alleged to justify the waiver or exception requested.”<sup>333</sup> Moreover, Petitioners’ purported basis for reconsideration of the Waste Confidence Rule is the alleged vulnerability of spent fuel to a potential terrorist attack,

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<sup>329</sup> See Petition at 72-75.

<sup>330</sup> 10 C.F.R. § 2.335(a).

<sup>331</sup> See *Millstone*, CLI-05-24, 62 NRC at 560-61.

<sup>332</sup> *Conn. Yankee Atomic Power Co.* (Haddam Neck Plant), CLI-03-7, 58 NRC 1, 8 (2003) (citing *Metro. Edison Co.* (Three Mile Island Nuclear Station, Unit 1), CLI-80-16, 11 NRC 674, 675 (1980)).

<sup>333</sup> 10 C.F.R. § 2.335(b).

which is an issue that is outside the scope of NRC environmental reviews.<sup>334</sup> Accordingly, Petitioners have not met their burden regarding waiver.

For the foregoing reasons, this contention is not within the scope of this proceeding and fails to satisfy the requirements for waiver of a regulation. Therefore, the Board should reject this contention.

**15. Contentions FSAR-C and NEPA-M (Former Contention 15) - - Global Warming**

The Supplemental Petition divides former Contention 15 into two contentions. These contentions allege that: “Global warming impacts are omitted from TVA license application—severe weather and carbon footprint.”<sup>335</sup> These issues are discussed separately below.

**a. Contention FSAR-C - - Severe Weather**

Petitioners allege that TVA failed to update the probabilistic risk assessments (“PRA”) described in the AP1000 DCD to reflect an upsurge in severe weather in the Southeast region, including Alabama.<sup>336</sup> As demonstrated below, this contention should be dismissed because (1) issues related to the AP1000 PRA were resolved in the design certification proceeding and therefore are outside the scope of this proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii); (2) the contention’s challenge to the description of severe weather in the Bellefonte FSAR is not properly supported, contrary to 10 C.F.R. § 2.309(f)(1)(v); and (3) the contention does not demonstrate a genuine material dispute, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

Petitioners directly challenge whether the design of the AP1000 will be able to withstand severe weather. Specifically, Petitioners state:

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<sup>334</sup> See Section V.B.4, *supra*.

<sup>335</sup> Petition at 78.

<sup>336</sup> *Id.* at 81.

The applicant references the Design Control Document for the AP1000 and adopts the contents of chapters where modeling is applied to severe weather impacts such as high winds and water levels. Pages 19.58-1 -- 19.58-3 of the Design Control Document for the AP1000 focus on severe weather impacts. The presentation of raw meteorological data is useful, but does not provide commentary on trends or future projections. Reliance on the DCD in the sections discussing structures, components and systems are devoid of any discussion of the acceleration in severe weather impacts.<sup>337</sup>

Such challenges are impermissible. Matters addressed in the AP1000 DCD are considered resolved in COL proceedings.<sup>338</sup>

Additionally, Petitioners claim: “What is not provided is any analysis that describes the basis for judging the probability of either frequency or intensity of a weather event such that it is possible to assess what data-set is being used.”<sup>339</sup> Again, Petitioners impermissibly are disputing the content of the PRA for the AP1000 DCD.<sup>340</sup>

Petitioners also appear to take issue with the description of severe weather provided in FSAR Section 2.3.<sup>341</sup> However, Petitioners do not explain what information in the Application is incorrect or inaccurate. For example, General Design Criterion (“GDC”) 2 in Appendix A to 10 C.F.R. Part 50 requires “consideration of the most severe of the natural phenomena that have been historically reported for the site and surrounding area, with sufficient margin for the limited accuracy, quantity, and period of time in which the historical data have been accumulated.”<sup>342</sup> In

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<sup>337</sup> *Id.* at 80.

<sup>338</sup> *See* 10 C.F.R. § 52.63(a)(5) and 10 C.F.R. Part 52, App. D, § VI.B.

<sup>339</sup> Petition at 81.

<sup>340</sup> Although Petitioners do not provide a reference for this statement, the preceding sentence discusses “loss of off-site power” and a “worst-case-scenario,” which are discussed in Section 19.58.2 of Tier 2 of the AP1000 DCD.

<sup>341</sup> Petition at 79-81.

<sup>342</sup> In this regard, Chairman Klein recently addressed the issue of global warming and the safe operations of nuclear plants. Letter from D. Klein, NRC, to E. Markey, House of Representatives (May 28, 2008) (ADAMS Accession Number ML081360313). He explained that the NRC regulations already require design

accordance with GDC 2, FSAR Sections 2.3 and 2.4 provide bounding analyses related to meteorology and hydrology of the Bellefonte site. Petitioners do not identify any defect in the values in those sections, and do not provide any basis for changing any of the values in those sections. The Commission has stated that a petitioner must “read the pertinent portions of the license application . . . [and] state the applicant’s position and the petitioner’s opposing view,” and explain why it disagrees with the applicant.<sup>343</sup> Petitioners merely proffer general statements that global warming should be considered without explaining what information in the FSAR is deficient or how it should be changed.

This contention should also be dismissed because Petitioners fail to provide adequate support for their contention, contrary to 10 C.F.R. § 2.309(f)(1)(v). Regarding severe weather impacts, Petitioners reference a study from the Center for Integrative Environmental Research as the basis for the contention.<sup>344</sup> Petitioners do not discuss any information from the study, nor do they provide a reference to any section of the study. Vague references such as this to documents are insufficient, and Petitioners are required to specify the portions of documents upon which they rely.<sup>345</sup> Additionally, this document does not provide any support for this contention. The study, entitled “The US Economic Impacts of Climate Change and the Costs of Inaction,” states that it “presents a review of economic studies for the United States and relates them to predicted

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characteristics that specifically address severe weather events and other slower changes in climate (*e.g.*, drought). *Id.*, Enclosure, at 1-2. Chairman Klein also explained: “Based on NRC’s activities related to climate change, and the relatively slow rate of this change, NRC is confident that any regulatory action that may be necessary will be taken in a timely manner to ensure the safety of all nuclear facilities regulated by the NRC.” *Id.*, Enclosure, at 2.

<sup>343</sup> Final Rule, Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, 54 Fed. Reg. at 33,170; *see also Millstone*, CLI-01-24, 54 NRC at 358.

<sup>344</sup> Petition at 79 n.25.

<sup>345</sup> *Seabrook*, CLI-89-03, 29 NRC at 240-41.

impacts of climate change.”<sup>346</sup> These topics do not provide information that brings into question the meteorological or hydrological data in the Application, and the study as a whole is not relevant to FSAR Sections 2.3 and 2.4.

As a basis for their attack on the PRA and the FSAR, Petitioners also cite a newspaper article on intensity of hurricanes due to warming of ocean waters.<sup>347</sup> However, even if the very general statements in the newspaper article regarding hurricanes are assumed to be true, Petitioners have provided no basis for applying such statements to an inland site such as Bellefonte. For example, FSAR Section 2.3.1.2.1.1 states:

Tropical cyclones, including hurricanes, lose strength as they move inland from the coast and the greatest concern for an inland site is possible flooding due to excessive rainfall. Although no hurricanes have reached Jackson County, sixteen tropical storms have passed through Jackson County.

Petitioners have not provided any information to dispute this statement, and have not even alleged that it is incorrect. Therefore, Petitioners’ citation to the newspaper article regarding hurricanes does not provide a sufficient basis for questioning the information in the FSAR.

Similarly, Petitioners claim that the “increasing frequency and impact of severe weather-related events is well documented in government agency reports,” and then provides two quotations.<sup>348</sup> However, these quotations do not appear in the referenced documents. Additionally, the quotations do not support the proposition for which they were quoted. Petitioners claim that the quotations demonstrate increasing frequency and impact of severe weather events, but the quotations do not discuss any increases; they only provide the overall

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<sup>346</sup> Center for Integrative Environmental Research, *The US Economic Impacts of Climate Change and the Costs of Inaction*, at 3 (Oct. 2007), available at <http://www.cier.umd.edu/documents/US%20Economic%20Impacts%20of%20Climate%20Change%20and%20the%20Costs%20of%20Inaction.pdf>.

<sup>347</sup> Petition at 81 n.29.

<sup>348</sup> *Id.* at 80.

numbers for specific time periods.<sup>349</sup> Petitioners' inaccurate and vague citations do not constitute a basis for this contention. Furthermore, Petitioners' imprecise reading of a document cannot be the basis for a litigable contention.<sup>350</sup>

Finally, this contention also should be dismissed because it does not demonstrate a genuine material dispute, contrary to 10 C.F.R. § 2.309(f)(1)(vi). Regarding severe weather impacts, Petitioners fail to provide "references to specific portions of the application."<sup>351</sup> Although Petitioners generally reference FSAR Sections 2.3, 3.3, 3.4, 3.5, and Chapter 19 as portions of the FSAR that need to address increases in the severity of weather in the region,<sup>352</sup> these sections constitute hundreds of pages of the Application. Such general references cannot satisfy the requirement of referencing specific portions of the Application.

In summary, to the extent that this contention attacks the PRA discussed in Chapter 19 of the DCD for the AP1000, the DCD has finality and therefore the contention raises an issue that is outside the scope of this proceeding. Furthermore, the contention should be dismissed because Petitioners have provided no basis or support for questioning the values provided in FSAR 2.3 and 2.4, and have not demonstrated a genuine material dispute with the Application. Therefore, the Board should reject this contention.

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<sup>349</sup> *Id.*

<sup>350</sup> *See Georgia Tech*, LBP-95-6, 41 NRC at 300.

<sup>351</sup> 10 C.F.R. § 2.309(f)(1)(vi).

<sup>352</sup> Petition at 79-80.

**b. Contention NEPA-M - - Greenhouse Gases and Carbon Footprint**

This contention alleges that “the applicant fails to include any discussion of Green House Gas emissions or ‘Carbon Foot-print’ in its environment report.”<sup>353</sup> As demonstrated below, this contention should be dismissed because it is without a legal or factual basis.

Petitioners’ allegations that the Application should discuss greenhouse gas emissions and the carbon footprint of the plant must fail.<sup>354</sup> First, Petitioners have not provided a legal basis for a discussion of a “carbon-footprint.” Although the ESRP does state that an ER should discuss gaseous emissions (*e.g.*, Section 5.8.1), there is nothing in NEPA, 10 C.F.R. Part 51, or the ESRP that requires an evaluation of a “carbon-footprint” *per se*. Contentions that advocate stricter requirements than agency rules impose are not admissible.<sup>355</sup>

As one of their bases for this contention, Petitioners claim that the Application does not provide the “carbon-footprint” for Bellefonte Units 3 and 4, because it does not analyze the greenhouse gas emissions of the “uranium fuel chain.”<sup>356</sup> This argument is outside the scope of this proceeding. Table S-3 in 10 C.F.R. § 51.51 addresses the effects of the uranium fuel cycle, including gaseous emissions and electricity consumed in the fuel cycle. This table is used in ER Section 5.7 (Uranium Fuel Cycle Effects). Petitioners’ claims that the Application does not address the carbon-footprint of the uranium fuel cycle are a direct attack on Table S-3, which is included in the NRC regulations. A contention that challenges an NRC rule is outside the scope

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<sup>353</sup> *Id.* at 82.

<sup>354</sup> *Id.*

<sup>355</sup> *See Turkey Point*, LBP-01-6, 53 NRC at 159.

<sup>356</sup> Petition at 82-83.

of the proceeding because, absent a waiver, “no rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding.”<sup>357</sup> Therefore, Petitioners’ argument fails.

Furthermore, Petitioners’ claim that the Application does not discuss the “carbon footprint” and greenhouse gas emissions is simply incorrect.<sup>358</sup> Although the Application may not use the specific phrase “carbon footprint,” it definitely discusses emissions, including greenhouse gas emissions: ER Section 4.4.1.6 discusses air quality during construction; ER Table 4.6-1 discusses measures and controls for air emissions during construction; ER Section 5.5 discusses regulation of air emissions during operation; ER Section 5.7.4 discusses emissions during the uranium fuel cycle; ER Table 5.7-2 (based on Table S-3 in 10 C.F.R. Part 51) provides emissions from the uranium fuel cycle; and ER Section 5.8.1.5 discusses air quality during operations. ER Section 10.3.1.3, ER Table 10.3-1, ER Section 10.4.1.2.5, and ER Table 10.4-2 specifically discuss the avoidance of air pollution and greenhouse gas emissions, including the beneficial impact of Bellefonte Units 3 and 4 on global climate change and global warming. Petitioners simply ignore all of this information in the Application. A contention that does not directly controvert a position taken by the applicant in the application is subject to dismissal.<sup>359</sup>

Finally, Petitioners’ arguments regarding a “carbon-footprint” likewise must fail because they do not satisfy 10 C.F.R. § 2.309(f)(1)(v). Petitioners do not provide any expert opinions to support their arguments and only cite to one report. However, Petitioners do not even use the report to support their contention, but merely state that it is “[a]n excellent resource for

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<sup>357</sup> See 10 C.F.R. § 2.335(a).

<sup>358</sup> Petition at 82.

<sup>359</sup> See *Comanche Peak*, LBP-92-37, 36 NRC at 384.

conducting [a carbon-footprint] analysis.”<sup>360</sup> A petitioner bears the burden to present the factual information or expert opinions necessary to support its contention adequately, and failure to do so warrants rejection of the contention.<sup>361</sup>

In summary, this contention’s allegations that the ER does not, but should, discuss greenhouse gases and the carbon footprint of Bellefonte Units 3 and 4 are factually and legally baseless. Therefore, the Board should reject this contention.

**16. Contention NEPA-N (Former Contention 16) - - Cost Estimates**

This contention has the heading “Environmental Report’s Inadequate Cost Estimates and Cost Comparisons,” and asserts that “TVA dismisses alternative energy sources such as wind and solar on the ground that they cost much more than nuclear power.”<sup>362</sup> This contention asserts that TVA’s cost comparison “fails to provide reasonably up-to-date and accurate information regarding the costs of nuclear power, the costs of alternative energy sources, and the financial risks posed by the election of nuclear power as an energy source.”<sup>363</sup> This contention also asserts that the cost comparison of alternative generation technologies in ER Chapter 9 is inconsistent with the nuclear plant cost estimate in ER Chapter 10.<sup>364</sup>

As demonstrated below, this contention should be dismissed because (1) the allegations regarding the costs of alternatives are not material to the outcome of this proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iv); and (2) the allegations regarding the costs of Bellefonte do not demonstrate that a genuine material dispute exists with respect to the Application, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

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<sup>360</sup> Petition at 83 n.30.

<sup>361</sup> See 10 C.F.R. § 2.309(f)(1)(v); *Yankee*, CLI-96-7, 43 NRC at 262.

<sup>362</sup> Petition at 84.

<sup>363</sup> *Id.*

<sup>364</sup> *Id.*

This contention does not demonstrate that the issue raised is material to the findings NRC must make to support issuance of a COL for the proposed Bellefonte Units 3 and 4. Contrary to Petitioners’ assertion, the premise of this contention is wrong; the decision not to select wind, solar or any of the other energy source alternatives to nuclear power in ER Chapter 9 was not based on cost comparisons. ER Chapter 9 evaluates the ability of energy alternatives to provide baseload capacity.<sup>365</sup> As for wind, the ER explains, “wind generation is not a reasonable alternative for baseload power in the Southeast.”<sup>366</sup> As for solar, the ER demonstrates that “solar energy, due to its intermittent nature, cannot be relied upon for baseload power.”<sup>367</sup> Thus, neither wind nor solar is a viable alternative to fulfill the purpose of the proposed action – to provide baseload generating capacity – regardless of their cost.<sup>368</sup>

In addition to considering wind and solar as energy alternatives, the ER considers wind and solar generation in combination with fossil-fuel-fired facilities, and finds that such combinations could be used to generate baseload power and would serve the equivalent purpose of the proposed project.<sup>369</sup> The ER assesses the environmental impacts of such combinations and shows that wind and solar generation in combination with fossil-fuel-fired facilities would have equivalent or greater environmental impacts as compared to a new nuclear facility at the Bellefonte site.<sup>370</sup> Similarly, ER Section 9.2.3 assesses the environmental impacts of the reasonable alternatives to nuclear power for providing baseload generation capacity, and shows

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<sup>365</sup> ER at 9.2-10.

<sup>366</sup> *Id.* at 9.2-11.

<sup>367</sup> *Id.* at 9.2-13.

<sup>368</sup> The analyses described in the ER also found that solar power “is not cost-competitive and has LARGE land-use impacts.” *Id.* However, an issue about this cost judgment is not material to any finding the NRC must make because it would not alter the determination that solar is not a viable alternative for providing baseload generating capacity.

<sup>369</sup> *See id.* § 9.2.3.3.

<sup>370</sup> *Id.* at 9.2-37.

that none of the alternatives is environmentally preferable to the proposed project.<sup>371</sup> Although the analysis also concluded that the alternatives would all have higher energy costs than the proposed project,<sup>372</sup> a challenge to such cost comparisons would not raise a material issue because, in a NEPA analysis, the cost estimates for the proposed nuclear units are material only if an alternative is *environmentally* preferable.<sup>373</sup>

Since this contention does not raise a material issue, TVA will not discuss in any detail Petitioners' arguments about the ER cost estimates and comparisons. It suffices to note that:

- There is no merit to the claim made in the Petition at page 84 and elsewhere that the differences between the cost numbers provided in the ER at page 9.2-38 contradict the cost estimates presented in ER Chapter 10. The discussion at ER page 9.2-38 provides the results of a published cost comparison, and not TVA's own cost estimates. It was reasonable for the ER to use such published cost comparisons, rather than assess the costs of each alternative, since the cost comparison was not the deciding factor for purposes of the ER.
- The Petition alleges that the ER uses obsolete studies undertaken in 2003 and 2004 as part of the basis for its cost estimates in ER Chapter 10.<sup>374</sup> However, the ER explains that the estimates in those studies were adjusted to take into account subsequent trends in commodity and labor costs, and therefore are current.<sup>375</sup>

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<sup>371</sup> *Id.* at 9.2-38.

<sup>372</sup> *Id.* at 9.2-38, 39.

<sup>373</sup> *Exelon Generation Co., LLC* (Early Site Permit for the Clinton ESP Site), LBP-05-19, 62 NRC 162, 179 (2005), *aff'd*, CLI-05-29, 64 NRC 460 (2005), *aff'd sub nom.*, *Env'tl. Law & Policy Ctr. v. NRC*, 470 F.3d 676 (7th Cir. 2006); *Consumers Power Co.* (Midland Plant, Units 1 and 2), ALAB-458, 7 NRC 155, 162 (1978) (concluding that if an alternative is not environmentally preferable, "such cost-benefit balancing does not take place," and the alternative need not be considered further).

<sup>374</sup> Petition at 85.

<sup>375</sup> ER at 10.4-7.

- Petitioners’ reference to other cost estimates, such as the Florida Power & Light Company (“FPL”) estimate<sup>376</sup> or the Keystone estimate,<sup>377</sup> makes no effort to show that the estimates are for comparable projects or to provide any facts or expert opinion that would support Petitioners’ position that the differences in the estimates reflect adversely on the TVA estimate. In fact, the FPL testimony cited in the Petition<sup>378</sup> states that the FPL estimate is higher than other estimates available in the industry, and attributes the differences to a variety of factors, including such factors as FPL’s estimate of the costs for transmission integration at its Turkey Point site and the addition of cooling towers.<sup>379</sup> Ironically, FPL defended the reliability of its estimate by noting that it was based on a TVA estimate.<sup>380</sup>

For the foregoing reasons, the allegation regarding the costs of alternatives is immaterial, and the allegation regarding the costs of Bellefonte does not demonstrate that a genuine material dispute exists with the ER. Therefore, the Board should reject this contention.

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<sup>376</sup> Petition at 85.

<sup>377</sup> *Id.* at 86.

<sup>378</sup> *Id.* at 85 n.31.

<sup>379</sup> Direct Testimony of Steven D. Scroggs, Before the Florida Public Service Commission, at 44-46 (Oct. 16, 2007) (cited by Petitioners (Petition at 85 n.31)), *available at* <http://www.psc.state.fl.us/library/filings/07/09467-07/09467-07.pdf>.

<sup>380</sup> *Id.* at 47. The reasonableness of the ER estimate is supported by the recent announcement that South Carolina Electric & Gas (“SCE&G”) has entered into an Engineering, Procurement, and Construction contract for a two-unit AP1000 plant and based upon that contract it estimated the costs of the plant to be \$9.8 billion. SCANA Corporation, SCE&G & Santee Cooper Announce Contract to Build Two New Nuclear Units (May 27, 2008), *available at* <http://www.scana.com/en/investor-relations/news-releases/sceg-santee-cooper-to-build-nuclear-units.htm>. The SCE&G cost is more in line with TVA’s estimates of \$6.4 to \$7.1 billion. Additionally, it may be expected that TVA’s cost for Bellefonte Units 3 and 4 will be less than for the other two-unit AP1000 plants, because Bellefonte Units 3 and 4 are planning to make use of the existing structures that were constructed for Bellefonte Units 1 and 2, such as the cooling towers, intake and discharge structures, and transmission system. ER at 9.4-2.

**17. Contention NEPA-O (Former Contention 17) - - Health Impacts of Radiological Releases from Yucca Mountain**

This contention alleges: “Inadequacy of Environmental Report’s analysis of human health impacts of irradiated fuel disposal.”<sup>381</sup> Petitioners attack EPA’s proposed radiation dose standards for Yucca Mountain and, based upon the alleged health impacts associated with those standards, argue that “the evidence shows that the human health impacts of disposing of spent fuel from the proposed Bellefonte plant are ‘LARGE.’”<sup>382</sup>

As demonstrated below, this contention should be dismissed because (1) the allegations regarding EPA’s proposed dose standards for Yucca Mountain are outside the scope of this proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii); (2) the allegations regarding the health impacts of EPA’s proposed standards are not properly supported, contrary to 10 C.F.R. § 2.309(f)(1)(v); and (3) the bases provided in the contention focus on Yucca Mountain and do not establish a genuine material dispute with respect to the Application, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

First, Petitioners’ arguments in this contention are outside the scope of this proceeding because they are based entirely on Petitioners’ disputes with EPA’s proposed standards for the Yucca Mountain spent fuel repository. EPA issued proposed revised radiation protection standards for the repository in August 2005,<sup>383</sup> and the NRC issued a notice of proposed rulemaking to amend 10 C.F.R. Part 63 in September 2005 to make corresponding changes.<sup>384</sup> The EPA proposed a standard of 15 mrem/year committed effective dose equivalent for the first

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<sup>381</sup> Petition at 92.

<sup>382</sup> *Id.* at 93-94.

<sup>383</sup> Proposed Rule, Public Health and Environmental Radiation Protection Standards for Yucca Mountain, NV, 70 Fed. Reg. 49,014 (Aug. 22, 2005).

<sup>384</sup> Proposed Rule, Implementation of a Dose Standard After 10,000 Years, 70 Fed. Reg. 53,313 (Sept. 8, 2005).

10,000 years and 350 mrem/year committed effective dose equivalent from 10,000 years up to 1 million years after disposal.<sup>385</sup>

Petitioners dispute the proposed standard of 350 mrem/year, claiming that it does not represent “the full range of doses that would be experienced by the most exposed people at the time of peak dose in the period between 10,000 years and one million years after disposal”<sup>386</sup> and “[t]he more exposed half of the population could receive doses that are much higher than the median of 350 millirem” based on DOE’s 2002 EIS for the Yucca Mountain repository.<sup>387</sup> These arguments address EPA’s proposed standards, not TVA’s Application, and the Commission has explained that a contention that raises a matter that is the subject of a rulemaking is outside the scope of this proceeding.<sup>388</sup>

In this regard, the Petitioners discuss the health impacts of the dose limits on Yucca Mountain, not the impacts of spent fuel stored from Bellefonte that may be placed in Yucca Mountain.<sup>389</sup> Since the spent fuel from Bellefonte would constitute a very small fraction of the total high level waste at Yucca Mountain, Petitioners’ claims regarding the health impacts of the dose limits on Yucca Mountain cannot properly be attributed to Bellefonte. In short, it is apparent that this contention pertains to Yucca Mountain, not Bellefonte, and therefore is outside the scope of this proceeding.<sup>390</sup>

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<sup>385</sup> Proposed Rule, Public Health and Environmental Radiation Protection Standards for Yucca Mountain, NV, 70 Fed. Reg. 49,014.

<sup>386</sup> Petition at 93.

<sup>387</sup> *Id.* at 94.

<sup>388</sup> *See Ocone*, CLI-99-11, 49 NRC at 345 (citing *Douglas Point*, ALAB-218, 8 AEC at 85); *see also* New Reactor Policy Statement, 73 Fed. Reg. at 20,972.

<sup>389</sup> Petition at 94-95.

<sup>390</sup> Furthermore, Petitioners state that “BREDL adopts and incorporates by reference the Institute for Energy and Environmental Research’s (‘IEER’s’) comments on EPA’s proposed radiation protection standards for the Yucca Mountain repository.” *Id.* at 93. By definition, comments on a rulemaking, especially one that is not even conducted by the NRC, are outside of the scope of this proceeding. Petitioners simply repeat their earlier

Second, this contention should also be dismissed because Petitioners' claim that the contention is supported by an expert is flawed, thereby rendering the contention unsupported, contrary to 10 C.F.R. § 2.309(f)(1)(v). Petitioners state that "[t]his contention is supported by the expert declaration of Dr. Arjun Makhijani."<sup>391</sup> However, Dr. Makhijani's declaration provides no facts or opinions on this topic. Instead, the declaration states: "I am responsible for the factual content and expert opinions expressed in BREDL's contentions regarding the following subjects: . . . Inadequacy of Environmental Report's Analysis of Human Health Impacts of Spent Fuel Disposal."<sup>392</sup> The Petition claims that the declaration provides support, but the declaration claims that the support is in the Petition. This circular reasoning is insufficient to provide the required support for an admissible contention.<sup>393</sup> Furthermore, the Commission has ruled that "an expert opinion that merely states a conclusion (*e.g.*, the application is 'deficient,' 'inadequate,' or 'wrong') without providing a *reasoned basis or explanation* for that conclusion is inadequate because it deprives the Board of the ability to make the necessary, reflective assessment of the opinion" as it is alleged to provide a basis for the

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comments on EPA's proposed radiation protection standards to try to support this contention. An attempt to incorporate by reference a different organization's comments on EPA rulemaking, without any discussion, does not constitute a basis for a contention. The mere incorporation of massive documents by reference is unacceptable. *See Browns Ferry*, LBP-76-10, 3 NRC at 216; *see also La. Energy Servs., L.P.* (National Enrichment Facility), LBP-06-08, 63 NRC 241, 255 n.10 (2006) ("the Board again emphasized that incorporation by reference of a document as purported testimony or evidence is not an acceptable practice, and that those documents should instead be specifically cited and relied on as evidentiary support for Dr. Makhijani's prefiled testimony").

<sup>391</sup> Petition at 93.

<sup>392</sup> Makhijani Declaration at 3.

<sup>393</sup> The regulations require that the Petitioners provide "a concise statement of the . . . expert opinions which support" their position. 10 C.F.R. § 2.309(f)(1)(v). A declaration that provides no supporting information does not satisfy this standard.

contention.<sup>394</sup> The Board cannot evaluate the expert opinion if the expert opinion is not identified.

Additionally, Petitioners provide no explanation for their conclusions. For example, without any explanation or support, Petitioners allege that a “95 percentile dose of 600 millirem per year means that five percent of the exposed women would have a lifetime risk of getting cancer equal to or greater than one in 16, and a lifetime fatal cancer risk of equal to or greater than one in 33.”<sup>395</sup> This unsupported conclusion does not provide the support required for an admissible contention, contrary to 10 C.F.R. § 2.309(f)(1)(v).

Petitioners also claim that “[t]he EPA has said that much lower risk (*i.e.*, 25 millirem/year, going up to 100 millirem/year) is ‘unacceptably high.’”<sup>396</sup> The letter referenced by Petitioners to support this statement addresses an entirely different topic—the proposed radiation limit for *unrestricted release* of a decommissioned site.<sup>397</sup> The nature of a dose limit at a site that is being approved for immediate unrestricted release is much different than a dose limit for a spent fuel repository that will apply only to doses after 10,000 years. A petitioner’s imprecise reading of a document cannot be the basis for a litigable contention.<sup>398</sup> Thus, Petitioners’ reference to this document does not support this contention.

Finally, this contention should be dismissed, because, contrary to 10 C.F.R. § 2.309(f)(1)(vi), Petitioners do not demonstrate “that a genuine dispute exists with the applicant/licensee on a material issue of law or fact.” Petitioners do not dispute that actual doses

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<sup>394</sup> *USEC*, CLI-06-10, 63 NRC at 472 (emphasis added) (quoting *Private Fuel Storage*, LBP-98-7, 47 NRC at 181).

<sup>395</sup> Petition at 94.

<sup>396</sup> *Id.* at 95.

<sup>397</sup> *Id.*, Exhibit A.

<sup>398</sup> See *Georgia Tech*, LBP-95-6, 41 NRC at 300.

from Yucca Mountain will be within EPA's and NRC's proposed standards. Instead, they argue that such doses will have LARGE rather than SMALL impacts. However, the Bellefonte ER and NRC regulations conclude that impacts are SMALL when: "Environmental effects are not detectable or are so minor that they neither destabilize nor noticeably alter any important attribute of the resource. For the purposes of assessing radiological impacts, the Commission has concluded that those impacts that do not exceed permissible levels in the Commission's regulations are considered small."<sup>399</sup> Since there is no dispute related to the underlying facts, and since Petitioners' arguments related to the significance of those facts are inconsistent with the definition of SMALL endorsed by NRC regulations, this contention does not satisfy 10 C.F.R. § 2.309(f)(1)(vi).

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

**18. Contention NEPA-P (Former Contention 18) - - Attacks on NRC Table S-3**

This contention alleges: "Inadequacy of Environmental Report's reliance on Table S-3 regarding radioactive effluents from the uranium fuel [sic] cycle."<sup>400</sup> Petitioners recognize that its contention challenges "generic assumptions and conclusions in Table S-3," but they claim that there is "new and significant information" that must be considered in this proceeding.<sup>401</sup>

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<sup>399</sup> 10 C.F.R. Part 51, App. B, Table B-1, n.3. The definitions of SMALL, MODERATE, and LARGE in Appendix B apply to license renewal proceedings; however, it is common NRC practice to apply those definitions to other proceedings as well. *See, e.g., Sys. Energy Res., Inc.* (Early Site Permit for Grand Gulf ESP Site), LBP-07-01, 65 NRC 27, 100 (2007), *aff'd*, CLI-07-14, 65 NRC 216 (2007). The Bellefonte ER uses those definitions. ER §§ 4.0 and 5.0.

<sup>400</sup> Petition at 95.

<sup>401</sup> *Id.* at 97.

Petitioners also state that Table S-3 does not “adequately address[] the environmental impacts of disposal of Class B, C, and Greater than Class C waste.”<sup>402</sup>

This contention should be dismissed, because it is outside the scope of this proceeding and impermissibly challenges Table S-3 of 10 C.F.R. Part 51, contrary to 10 C.F.R.

§ 2.309(f)(1)(iii). Petitioners entirely concede this point by stating that “BREDL recognizes that this contention raises a challenge to the generic assumptions and conclusions in Table S-3.”<sup>403</sup>

The NRC regulations unequivocally state that a contention that challenges an NRC rule is outside the scope of the proceeding because, absent a waiver, “no rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding.”<sup>404</sup>

Every issue raised by Petitioners in this contention challenges Table S-3. For example, Petitioners allege that Table S-3 “fails to make accurate assumptions or estimates about the nature of disposal methods that must be used or the types of radioactive wastes to be disposed of” and “Table S-3 is severely outdated.”<sup>405</sup> Additionally, Petitioners state that “Table S-3 makes no mention of the large amounts of depleted uranium that will be generated in the course of enrichment of uranium to produce fuel for the proposed nuclear reactors.”<sup>406</sup> These challenges are outside the scope of this proceeding and do not support an admissible contention.

The NRC regulations clearly explain that a petitioner may only challenge a regulation in an adjudicatory proceeding by submitting a petition for a waiver to allow the challenge.<sup>407</sup>

Petitioners have not requested such a waiver. Instead, Petitioners claim that the information in

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<sup>402</sup> *Id.* at 99.

<sup>403</sup> *Id.* at 97.

<sup>404</sup> *See* 10 C.F.R. § 2.335(a).

<sup>405</sup> Petition at 96, 100.

<sup>406</sup> *Id.* at 101.

<sup>407</sup> 10 C.F.R. § 2.335.

this contention is “new and significant information,” and it “must be considered in the EIS for the Bellefonte plant because it would have a significant effect on the outcome of TVA’s and the NRC’s analyses of the environmental impacts of licensing the proposed plant.”<sup>408</sup> This is not the correct standard for the requirement for a waiver under 10 C.F.R. § 2.335, and Petitioners have not addressed any of the waiver requirements under this section. Petitioners further fail to satisfy any of the factors of the four-part test required for making a prima facie showing for a waiver; therefore, the matter may not be litigated, and “the presiding officer may not further consider the matter.”<sup>409</sup>

The cases identified by Petitioners are either irrelevant or actually support rejection of this contention. For example, Petitioners reference *Baltimore Gas & Electric Co. v. Natural Resources Defense Council*, in which the U.S. Supreme Court ruled that Table S-3 provided an appropriate means of addressing the impacts of the fuel cycle, and complies with NEPA.<sup>410</sup> Apparently, Petitioners cited the case for the proposition that this contention should be admitted so that they will be “plugged in” to the licensing decision on this generic issue regarding the adequacy of Table S-3.<sup>411</sup> The only part of the Court’s decision that discusses being “plugged in” is a reference to a statement made by the appellate court that was reversed by the Supreme Court in this very decision.<sup>412</sup> Additionally, this phrase was used by the appellate court to demonstrate that the Commission has discretion to decide issues generically and then require that

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<sup>408</sup> Petition at 97.

<sup>409</sup> 10 C.F.R. § 2.335(c); *see also* *Millstone*, CLI-05-24, 62 NRC at 560 (“The use of ‘and’ in this list of requirements is both intentional and significant. For a waiver request to be granted, *all four* factors must be met.”) (citations omitted).

<sup>410</sup> *Balt. Gas & Elec. Co. v. Natural Res. Def. Council*, 462 U.S. 87, 89-90 (1983).

<sup>411</sup> Petition at 97.

<sup>412</sup> *Balt. Gas & Elec. Co.*, 462 U.S. at 101.

those generic determinations be “plugged into” individual licensing decisions.<sup>413</sup> This has nothing to do with Petitioners’ request to remain a part of the proceeding even though their issue was generically resolved; indeed, it argues for the opposite result.

Additionally, Petitioners randomly cite to *Marsh v. Oregon Natural Resources Council*, but fail to explain its relevance or provide a specific citation.<sup>414</sup> *Marsh* addresses the standard for preparing a supplemental EIS,<sup>415</sup> but this question is not at issue for the TVA Application, because no EIS has been prepared yet. The case certainly does not support Petitioners’ attempts to challenge an NRC regulation in this proceeding.

Petitioners also reference *Massachusetts v. NRC*, alleging that the NRC must “consider any new and significant information regarding environmental impacts before renewing a nuclear power plant’s operating license.”<sup>416</sup> Petitioners’ own statements regarding this case argue against their position. First, Petitioners state that “the First Circuit found that . . . the NRC may make generic determinations regarding the significance of environmental impacts and prohibit challenges to those generic determinations in individual proceedings.”<sup>417</sup> This statement supports rejecting this contention because the contention challenges the generic determinations made regarding Table S-3. Additionally, the quotation regarding “new and significant information” is for “renewing a nuclear power plant’s operating license,” as provided in 10 C.F.R. § 51.53(c). The current proceeding is not for license renewal, and Section 51.53(c) is not applicable to COL applications. As the First Circuit explained in *Massachusetts*, if a petitioner wishes to challenge NRC’s generic determination of an environmental impact, the appropriate

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<sup>413</sup> *Id.*

<sup>414</sup> Petition at 97.

<sup>415</sup> *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 361 (1989).

<sup>416</sup> Petition at 97.

<sup>417</sup> *Id.*

approach is to file a rulemaking petition.<sup>418</sup> Petitioners have already stated that they plan to file a rulemaking petition; however, this does not support admission of this contention.<sup>419</sup>

For the foregoing reasons, this contention impermissibly attacks NRC's regulations and is outside the scope of this proceeding. Therefore, the Board should reject this contention.

**19. Contention NEPA-Q (Former Contention 19) - - Health Impacts of Radiological Releases from the Uranium Fuel Cycle**

This contention alleges: "Environmental Report's improper characterization of health effects from the uranium fuel cycle as small and failure to adequately compare them to health effects of alternative energy sources."<sup>420</sup>

As demonstrated below, this contention should be dismissed because the basis for the contention does not establish a genuine material dispute with respect to the Application, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

Petitioners allege some minor differences in the characterizations of health effects from the uranium fuel cycle. However, they have not demonstrated that these differences would impact the NRC's findings.<sup>421</sup>

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<sup>418</sup> *Massachusetts v. NRC*, 522 F.3d 115, 127 (1st Cir. 2008).

<sup>419</sup> In addition to being outside of the scope of this proceeding, Petitioners' arguments regarding depleted uranium are unsupported, contrary to 10 C.F.R. § 2.309(f)(1)(v). Petitioners claim that "DU has radiological characteristics similar to Greater than Class C low-level waste" (Petition at 102), but this characterization is without legal basis. In a recent proceeding involving Dr. Makhijani, the Commission unequivocally stated that depleted uranium is Class A waste. *La. Energy Servs., L.P.* (National Enrichment Facility), CLI-05-20, 62 NRC 523, 535-36 (2005); *LES*, LBP-06-08, 63 NRC at 267 ("[T]he Commission has stated unequivocally that depleted uranium is Class A waste under 10 C.F.R. § 61.55(a) as currently in force."). In this same proceeding, Dr. Makhijani's arguments regarding the environmental impact of shallow land disposal of depleted uranium were rejected, and the Board affirmed the NRC's conclusion that the environmental impacts of disposal of depleted uranium from an enrichment facility were small. *LES*, LBP-06-08, 63 NRC at 285-87. Petitioners' attempts to re-visit Dr. Makhijani's arguments that were rejected in a prior licensing proceeding cannot support this contention. Additionally, as part of their contention, Petitioners provide references that are similar to those provided in Contention NEPA-O (former Contention 17) regarding Dr. Makhijani and IEER. TVA's responses to this information in Contention NEPA-O (former Contention 17) apply to this contention as well.

<sup>420</sup> Petition at 103.

For example, Petitioners allege that “the Environmental Report fails to evaluate what [the calculated annual population dose from routine operations] means with respect to the number of cancer illnesses and deaths that are likely to be caused by the plant’s operation.”<sup>422</sup> This is simply incorrect, because the ER provides an estimated cancer mortality risk of 0.8 per Reference Reactor Year (“RRY”), as noted in the Petition.<sup>423</sup>

The only difference between the information in the Application and that in the Petition is that TVA uses a risk estimator of 500 cancer deaths per 10,000 person-Sv (1 million man-rem),<sup>424</sup> while Petitioners claim a value of 570 cancer deaths per million rem.<sup>425</sup> This difference in the risk estimators does not demonstrate a material issue. As the Commission has observed, “[t]he dispute at issue is ‘material’ if its resolution would ‘make a difference in the outcome of the licensing proceeding.’”<sup>426</sup> This small difference in the value for the risk estimator does not make a difference in the outcome of this proceeding.

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<sup>421</sup> This contention should also be dismissed, because, similar to Contention NEPA-O (former Contention 17) and Contention NEPA-P (former Contention 18), Petitioners’ claim that the contention is supported by an expert is flawed, contrary to 10 C.F.R. § 2.309(f)(1)(v). Petitioners state that “[t]his contention is supported by the Declaration of Dr. Arjun Makhijani.” *Id.* at 106. However, Dr. Makhijani’s declaration provides no facts or opinions on this topic. Instead, the declaration states: “I am responsible for the factual content and expert opinions expressed in BREDL’s contentions regarding the following subjects: . . . Environmental Report’s Improper Characterization of Health Effects from the Uranium Fuel Cycle as SMALL and Failure to Adequately Compare Them to Health Effects of Alternative Energy Sources.” Makhijani Declaration at 3. The Petition claims that the declaration provides support, but the declaration claims that the support is in the Petition. This circular reasoning is insufficient to support an admissible contention. Furthermore, even if this deficiency is ignored, the Petition does not specify what information is provided by Dr. Makhijani. The Board cannot evaluate the expert opinion if the expert opinion is not even identified. Cf. *USEC*, CLI-06-10, 63 NRC at 472 (quoting *Private Fuel Storage*, LBP-98-7, 47 NRC at 181).

<sup>422</sup> Petition at 103.

<sup>423</sup> *Id.* at 104. This number does not include the effects of doses from Rn-222 and Tc-99. However, that number can easily be calculated based upon the information in ER Section 5.7.5 and Table 5.7-4. ER Table 5.7-4 estimates a 100-year overall involuntary whole-body dose commitment of 2,247 person-rem per operation year. ER Section 5.7.5 uses a risk estimator from a U.S. Government source of 500 cancer deaths per million person-rem.

<sup>424</sup> ER § 5.7.5.

<sup>425</sup> Petition at 104.

<sup>426</sup> *Oconee*, CLI-99-11, 49 NRC at 333-34; see also Final Rule, Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, 54 Fed. Reg. at 33,172.

Furthermore, Petitioners have not disputed that the doses from the fuel cycle will be within regulatory limits. The Bellefonte ER and NRC regulations define SMALL as: “Environmental effects are not detectable or are so minor that they neither destabilize nor noticeably alter any important attribute of the resource. For the purposes of assessing radiological impacts, the Commission has concluded that those impacts that do not exceed permissible levels in the Commission’s regulations are considered small.”<sup>427</sup> Since the doses from Bellefonte are within the NRC regulations, by definition the impacts are SMALL.

Additionally, the Application demonstrates that the environmental effects of the radiation from the fuel cycle will be minor, given that the doses will be a small fraction of the background doses.<sup>428</sup> Petitioners’ only response to this discussion in the ER consists of arguments regarding trees falling in a forest and punching a neighbor.<sup>429</sup> Such arguments do not demonstrate a genuine dispute. If a petitioner believes the license application fails to adequately address a relevant issue, then the petitioner is to “explain why the application is deficient.”<sup>430</sup>

Finally, Petitioners’ argument that “the likely incidence of cancer illness and mortality is significantly in excess of cancer illness and mortality from exposure to natural sources of radiation” is unsupported. As demonstrated in ER Table 5.7-5, and unchallenged by Petitioners, the estimated average dose equivalent to the U.S. population for natural sources is 300 mrem/yr, while only 0.05 mrem/yr for the nuclear fuel cycle. An increase in the average dose equivalent from 300 mrem/yr to 300.05 mrem/yr cannot by any reasonable standard be considered to cause

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<sup>427</sup> ER § 5.0; 10 C.F.R. Part 51, App. B, Table B-1, n.3. The definitions of SMALL, MODERATE, and LARGE in Appendix B apply to license renewal proceedings; however, it is common NRC practice to apply those definitions to other proceedings as well. *See, e.g., Grand Gulf*, LBP-07-01, 65 NRC at 100. The Bellefonte ER uses those definitions. ER §§ 4.0 and 5.0.

<sup>428</sup> ER § 5.7.5.

<sup>429</sup> Petition at 105.

<sup>430</sup> Final Rule, Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, 54 Fed. Reg. at 33,170; *see also Palo Verde*, CLI-91-12, 34 NRC at 156.

a health risk “significantly in excess” of that from natural sources.<sup>431</sup> Such arguments also do not demonstrate a genuine dispute with the Application.

For the foregoing reasons, this contention does not demonstrate that a genuine material dispute exists. Therefore, the Board should reject this contention.

**VI. PETITIONERS HAVE NOT JUSTIFIED USE OF THE HEARING PROCEDURES IN SUBPART G**

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

A request for hearing and/or petition for leave to intervene may, except in a proceeding under 10 CFR 52.103, also address the selection of hearing procedures, taking into account the provisions of §2.310. If a request/petition relies upon §2.310(d), the request/petition must demonstrate, by reference to the contention and the bases provided and the specific procedures in subpart G of this part, that resolution of the contention necessitates resolution of material issues of fact which may be best determined through the use of the identified procedures.

In turn, Section 2.310(d) states

In proceedings for the grant, renewal, licensee-initiated amendment, or termination of licenses or permits for nuclear power reactors, where the presiding officer by order finds that resolution of the contention or contested matter necessitates resolution of issues of material fact relating to the occurrence of a past activity, where the credibility of an eyewitness may reasonably be expected to be at issue, and/or issues of motive or intent of the party or eyewitness material to the resolution of the contested matter, the hearing for resolution of that contention or contested matter will be conducted under subpart G of this part.

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<sup>431</sup> Additionally, Petitioners allege that “[t]he ER should include a comparison of cancer incidence and mortality expected from both the proposed Bellefonte plant and from the use of alternative energy sources.” Petition at 106. Petitioners provide no reason for this conclusion, do not discuss how this would change the application, and do not provide any statutory or regulatory requirement for such a comparison.

When it issued these regulations, the Commission stated that given the provision in Section 2.310(d), “Subpart L procedures would be used, as a general matter, for hearings on power reactor construction permit and operating license applications under parts 50 and 52.”<sup>432</sup> Petitioners have chosen not to address the selection of any hearing procedures in their Petition. Therefore, by default, any proceeding arising out of the Petition should be conducted under Subparts C and L.

In any event, the contentions largely raise issues of law that are outside the scope of this proceeding (*e.g.*, Contentions MISC-A (former Contention 1), MISC-B (former Contention 2), MISC-C (former Contention 4), MISC-E (former Contention 6), NEPA-C (former Contention 9), MISC-F (former Contention 13), NEPA-L (former Contention 14), NEPA-O (former Contention 17), NEPA-P (former Contention 18), and NEPA-Q (former Contention 19)).<sup>433</sup> Furthermore, to the extent that the contentions raise factual issues that pertain to Bellefonte, none of the contentions, if admitted, would require eyewitness or other fact-specific testimony pertaining to a past activity, motive, or intent. Therefore, under Section 2.310(d), there is no basis for applying the formal hearing procedures in 10 C.F.R. Part 2, Subpart G. Instead, the hearing procedures in 10 C.F.R. Part 2, Subparts C and L should be applied if further proceedings regarding this Petition are deemed necessary.

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<sup>432</sup> Final Rule, Changes to Adjudicatory Process, 69 Fed. Reg. at 2206.

<sup>433</sup> In addition, portions of other contentions, such as Contention NEPA-A (former Contention 7) and Contention FSAR-C (former Contention 15), are also outside the scope of this proceeding.

## VII. CONCLUSION

For the foregoing reasons, the Petition is untimely without any justification, BEST has not demonstrated standing, and Petitioners have not submitted an admissible contention.

Accordingly, the Petition should be denied.

Respectfully submitted,

/signed (electronically) by Steven P. Frantz

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Dated in Washington, D.C.  
this 1st day of July 2008

**UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION**

**BEFORE THE ATOMIC SAFETY AND LICENSING BOARD**

In the Matter of	)	
	)	
TENNESSEE VALLEY AUTHORITY	)	Docket Nos. 52-014 and 52-015
	)	
(Bellefonte Nuclear Power Plant,	)	July 1, 2008
Units 3 and 4)	)	
	)	

**CERTIFICATE OF SERVICE**

I hereby certify that on July 1, 2008 a copy of “Applicant’s Answer to Petition to Intervene” was filed electronically with the Electronic Information Exchange on the following recipients:

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