# UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

### ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Michael M. Gibson, Chairman Dr. Gary S. Arnold Dr. Randall J. Charbeneau

In the Matter of

SOUTH TEXAS PROJECT NUCLEAR OPERATING CO.

Docket Nos. 52-012-COL & 52-013-COL

ASLBP No. 09-885-08-COL-BD01

(South Texas Project Units 3 and 4)

August 27, 2009

MEMORANDUM AND ORDER

(Ruling on Standing and Admissibility of Certain Contentions)

Applicant South Texas Project Nuclear Operating Co. (STP or the Applicant) has applied to the Nuclear Regulatory Commission (NRC) for two combined operating licenses (COL) under 10 C.F.R. Part 52 that would authorize STP to construct and to operate two new units employing the Advanced Boiling Water Reactor (ABWR) certified design on its South Texas site, located in Matagorda County, Texas. On April 21, 2009, three organizations – the Sustainable Energy and Economic Development Coalition (SEED), the South Texas Association for Responsible Energy, and Public Citizen (Petitioners) – jointly filed a petition to intervene challenging various aspects of STP's combined license application (COLA), including its Environmental Report (ER).

For the reasons set forth below, we conclude that (1) Petitioners have established their standing to intervene as of right, and (2) among the nineteen contentions decided in this order, Petitioners have provided one admissible contention, specifically Contention 21. Accordingly, Petitioners are admitted as parties to this contested proceeding for the purpose of litigating that

contention. Additionally, in this order, we do not address the admissibility of Contentions 8 through 16, and we intend to issue a subsequent order in September 2009 addressing the admissibility of these contentions.

### I. Background

On September 20, 2007, STP applied under Part 52 for a COL for two new reactors, STP Units 3 and 4, that it proposes to construct in accordance with the ABWR design.<sup>1</sup> If authorized,<sup>2</sup> construction is slated to take place at the STP site near Bay City, Texas, which is the location of STP Units 1 and 2. STP filed the Application on behalf of the joint applicants for STP Units 3 and 4, including NRG South Texas 3 LLC, NRG South Texas 4 LLC, and the City of San Antonio, Texas, acting by and through the City Public Service Board (CPS Energy).

On February 20, 2009, the Commission published a notice of hearing and opportunity to petition for leave to intervene in the COL proceeding for STP Units 3 and  $4.^3$  The notice informed those persons whose interest would be affected by the proposed COL of the opportunity to file, within sixty days, a request for a hearing and petition for leave to intervene in accordance with 10 C.F.R. § 2.309.<sup>4</sup>

On April 21, 2009, Petitioners timely filed a petition to intervene and request for hearing.<sup>5</sup>

Thereafter, on May 1, 2009, this Atomic Safety and Licensing Board was established to

<sup>&</sup>lt;sup>1</sup> <u>See</u> Notice of Receipt and Availability of Application for a Combined License, 72 Fed. Reg. 60,394 (Oct. 27, 2009). A publicly available version of the STP COL application for STP Units 3 and 4 can be found on the NRC's website at http://www.nrc.gov/reactors/new-reactors/col/south-texas-project.html (last visited August 26, 2009).

<sup>&</sup>lt;sup>2</sup> Under the Part 52 licensing process that governs the STP application for STP Units 3 and 4, an entity may apply for a COL that, if granted, would authorize both the construction and operation of a new reactor.

<sup>&</sup>lt;sup>3</sup> <u>See</u> [STP], Notice of Order, Hearing, and Opportunity to Petition for Leave to Intervene, 74 Fed. Reg. 7934 (Feb. 20, 2009).

<sup>&</sup>lt;sup>4</sup> Subpart C of Part 52 establishes procedures for the issuance of a combined construction permit and operating license for a nuclear power plant and the conduct of the hearing that is afforded for a COL.

<sup>&</sup>lt;sup>5</sup> <u>See</u> Petition for Intervention and Request for Hearing (Apr. 21, 2009) [hereinafter Petition].

adjudicate the STP COL proceeding.<sup>6</sup> On May 18, 2009, STP and the NRC Staff both responded to Petitioners' request for hearing.<sup>7</sup> On May 26, 2009, Petitioners filed replies to the opposition of both STP and the NRC Staff.<sup>8</sup> On June 4, 2009, STP moved to strike<sup>9</sup> portions of Petitioners' reply, and on June 10, Petitioners filed a response<sup>10</sup> to STP's motion to strike. On June 23-24, the Board conducted a two-day prehearing conference in Bay City, Texas, during which it heard oral argument from the participants regarding the admissibility of Petitioners' twenty-eight contentions.

# II. Analysis

# A. Standing of Petitioners to Participate in this Proceeding

# 1. Legal Requirements for Standing in NRC Proceedings

A petitioner's participation in a licensing proceeding hinges on a demonstration of the requisite standing. The agency has established requirements for standing derived from Section 189a of the Atomic Energy Act of 1954 (AEA),<sup>11</sup> which instructs the NRC to provide a hearing "upon the request of any person whose interest may be affected by the proceeding."<sup>12</sup> The Commission's implementing regulation, 10 C.F.R. § 2.309(a) and (d), directs a licensing board, in ruling on a request for a hearing, to consider (1) the nature of the petitioner's right under the AEA or the National Environmental Policy Act (NEPA)<sup>13</sup> to be made a party to the proceeding; (2) the nature and extent of the petitioner's property, financial, or other interest in the

<sup>&</sup>lt;sup>6</sup> <u>See</u> Establishment of Atomic Safety and Licensing Board, 74 Fed. Reg. 22,184 (May 12, 2009).

<sup>&</sup>lt;sup>7</sup> <u>See</u> [STP's] Answer Opposing Petition for Intervention and Request for Hearing (May 18, 2009) [hereinafter STP Answer]; NRC Staff's Answer to Petition for Intervention and Request for Hearing (May 18, 2009) [hereinafter Staff Answer].

<sup>&</sup>lt;sup>8</sup> <u>See</u> Petitioners' Reply to Applicant's Answer to Petition for Intervention and Request for Hearing (May 26, 2009); Petitioners' Reply to NRC Staff's Answer to Petition for Intervention and Request for Hearing (May 26, 2009).

<sup>&</sup>lt;sup>9</sup> <u>See</u> [STP's] Motion to Strike Portions of Petitioners' Reply (June 4, 2009).

<sup>&</sup>lt;sup>10</sup> <u>See</u> Petitioners' Response to Applicant's Motion to Strike Portions of Petitioners' Reply (June 10, 2009).

<sup>&</sup>lt;sup>11</sup> 42 U.S.C. §§ 2011-2297h-13.

<sup>&</sup>lt;sup>12</sup> <u>Id.</u> § 2239(a)(1)(A).

<sup>&</sup>lt;sup>13</sup> <u>Id.</u> §§ 4321-47.

proceeding; and (3) the possible effect of any decision or order that may be issued in the proceeding on the petitioner's interest.<sup>14</sup> In this regard, in cases involving the possible construction or operation of a nuclear power reactor, physical proximity to the proposed facility has been considered sufficient to establish the requisite standing elements.<sup>15</sup>

For an organization to establish standing, it must show either organizational or representational standing.<sup>16</sup> Here, Petitioners seek representational standing. It requires the organization (1) to demonstrate that the interest of at least one of its members will be harmed, (2) to identify that member by name and address, and (3) to show that the organization is authorized to request a hearing on behalf of that member.<sup>17</sup> The organization must show that the member has individual standing in order to assert representational standing on his or her behalf, and "the interests that the representative organization seeks to protect must be germane to its own purpose."<sup>18</sup>

The Commission has indicated that in evaluating a petitioner's standing, we are to construe the petition in favor of the petitioner.<sup>19</sup> We apply these rules and guidelines in evaluating whether Petitioners have standing.

# 2. Licensing Board's Ruling on Standing of Petitioners

For the reasons set forth below, we conclude that the three organizational petitioners -

SEED, Public Citizen, and the South Texas Association for Responsible Energy - have

<sup>&</sup>lt;sup>14</sup> 10 C.F.R. § 2.309(d)(1)(ii)-(iv).

<sup>&</sup>lt;sup>15</sup> <u>See Fla. Power & Light Co.</u> (St. Lucie Nuclear Power Plant, Units 1 & 2), CLI-89-21, 30 NRC 325, 329 (1989) (Proximity presumption generally applies where a petitioner has physical proximity to a nuclear power plant within fifty miles).

<sup>&</sup>lt;sup>16</sup> Organizational standing requires the party to "demonstrate a palpable injury in fact to its organizational interests that is within the zone of interests protected by the AEA or NEPA." <u>Fla.</u> <u>Power and Light Co.</u> (Turkey Point Nuclear Generating Plant, Units 3 & 4), ALAB-952, 33 NRC 521, 528-30 (1991); <u>see also Hydro Res., Inc.</u> (2929 Coors Road, Suite 101, Albuquerque, NM 87120), LBP-98-9, 47 NRC 261 (1998), <u>rev'd on other grounds</u>, CLI-98-16, 48 NRC 119 (1998). <sup>17</sup> <u>See GPU Nuclear, Inc.</u> (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 202 (2000).

<sup>&</sup>lt;sup>18</sup> <u>Consumers Energy Co.</u> (Palisades Nuclear Power Plant), CLI-07-18, 65 NRC 399, 409 (2007).

<sup>&</sup>lt;sup>19</sup> <u>See Ga. Inst. of Tech.</u> (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995).

established representational standing to participate in this proceeding through one or more of its members. The three individuals who have authorized the three organizational petitioners to represent them in this proceeding have established standing in their own right.<sup>20</sup> Neither the NRC Staff nor the Applicant object to Petitioners' representational standing.<sup>21</sup>

SEED, Public Citizen, and the South Texas Association for Responsible Energy have each demonstrated that one of its members would have standing to intervene in his or her own right and has authorized the organization to act on his or her behalf in this proceeding. Each of the organizational petitioners has demonstrated that one of its members lives within fifty miles of the proposed new reactors, with the closest member being eight miles from the proposed facility.<sup>22</sup> These identified members have provided affidavits declaring their concerns that effects from the proposed reactors will adversely affect both their environment as well as their own safety and health.<sup>23</sup>

#### Β. **Contention Admissibility**

#### 1. Standards for Admissibility of Contentions

Once establishing standing to intervene in the licensing process, petitioners "will then be free to assert any contention, which, if proved, will afford them the relief they seek."24 Admissible contentions are governed by 10 C.F.R. § 2.309(f)(1). Another Board recently summarized well the six criteria of 10 C.F.R. § 2.309(f)(1) that govern the admissibility of contentions:

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

<sup>&</sup>lt;sup>20</sup> The Petition includes three affidavits from authorized officials in support of standing for three organizations, SEED, Public Citizen, and the South Texas Association for Responsible Energy. <u>See</u> Petition at 4-5. <sup>21</sup> <u>See</u> Staff Answer at 9-12; STP Answer at 2.

<sup>&</sup>lt;sup>22</sup> See Petition at 4-5, Declaration of Susan Dancer (Apr. 17, 2009), Declaration of Bill Wagner (Apr. 17, 2009), Declaration of Daniel A. Hickl (Apr. 18, 2009).

<sup>&</sup>lt;sup>23</sup> See id.

<sup>&</sup>lt;sup>24</sup> Yankee Atomic Elec. Co. (Yankee Nuclear Power Station), CLI-96-1, 43 NRC 1, 6 (1996).

- (ii) <u>Brief Explanation</u>: Provide a brief explanation of the basis for the contention;
- (iii) <u>Within Scope</u>: Demonstrate that the issue raised in the contention is within the scope of the proceeding;
- (iv) <u>Materiality</u>: Demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding;
- (v) <u>Concise Statement of Alleged Facts or Expert Opinion</u>: Provide a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue; and
- (vi) <u>Genuine Dispute</u>: Provide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact. This information must include references to specific portions of the application (including the applicant's environmental report and safety report) that the petitioner disputes and the supporting reasons for each dispute, or, if the petitioner believes that the application fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioner's belief.<sup>25</sup>

Failure to comply with any of these requirements is grounds for dismissing a contention.<sup>26</sup>

# 2. Board Analysis and Rulings on Petitioners' Contentions

# a. Contention 1

Petitioners state in Contention 1:

The number and significance of authorizations and permits required for the combined license that have yet to be obtained by the Applicant preclude issuance of the COL. Further, the outstanding items preclude Petitioners from raising all material issues in this adjudication and they should be given appropriate leave to supplement their contentions as information related to the outstanding items is obtained.<sup>27</sup>

<sup>&</sup>lt;sup>25</sup> <u>Progress Energy Fla., Inc.</u> (Combined Licensed Application for Levy County Nuclear Power Plant, Units 1 & 2), LBP-09-10, 69 NRC \_\_, \_\_ (slip op. at 7) (July 8, 2009).

<sup>&</sup>lt;sup>26</sup> See Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325 (1999); <u>Ariz. Pub. Serv. Co.</u> (Palo Verde Nuclear Station, Units 1, 2, & 3), CLI-91-12, 34 NRC 143, 155-56 (1991).

<sup>&</sup>lt;sup>27</sup> Petition at 10.

Petitioners contend that, because the Applicant has not yet obtained all permits or authorizations from federal, state, and local agencies, this Board should hold this proceeding in abeyance until such permits and authorizations have been secured.<sup>28</sup> The Applicant does not dispute that there are a number of outstanding permits and authorizations, and in fact has catalogued the permits and authorizations that remain to be obtained in Table 1.2-1 of the ER, as required by 10 C.F.R. § 51.45(d). Issue is joined then, not on whether the Applicant has obtained these permits and authorizations, but rather on two separate questions: (1) whether the Applicant's failure to obtain these permits and authorizations is fatal to the NRC issuing the COL for STP Units 3 and 4,<sup>29</sup> and (2) whether the NRC will require the Applicant to obtain a permit to store high-level waste onsite under 10 C.F.R. Part 72, and if so, whether a waste storage permit must precede the issuance of a COL for STP Units 3 and 4.<sup>30</sup>

The Applicant maintains that this contention should be rejected because "there is no legal requirement to obtain any of the permits listed by Petitioners prior to COL issuance" and therefore this contention is inadmissible.<sup>31</sup> Applicant claims 10 C.F.R. § 51.45(d) requires an applicant to provide a list of all applicable permits and authorizations, but does not mandate that they be obtained prior to COL issuance.<sup>32</sup> Applicant also disputes Petitioners' insistence that it will be required to obtain a Part 72 license.<sup>33</sup> The Applicant further claims that Petitioners have failed to provide any legal or factual support for this contention, and hence that it fails to satisfy the pleading requirements of 10 C.F.R. § 2.309(f)(1)(iv).<sup>34</sup>

Similarly, the NRC Staff argues Contention 1 is inadmissible for failing to comply with the pleading requirements of 10 C.F.R. § 2.309(f)(1)(iii)-(vi) insofar as Petitioners fail to provide any legal or factual support for their assertion that such permits must precede issuance of the

<sup>30</sup> Id. at 12; Tr. at 16-19.

- <sup>32</sup> Id. at 15-16.
- <sup>33</sup> <u>Id.</u> at 16.

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<sup>&</sup>lt;sup>28</sup> <u>See id.</u> at 11; Tr. at 10-12.

<sup>&</sup>lt;sup>29</sup> Petition at 11-12.

<sup>&</sup>lt;sup>31</sup> STP Answer at 15.

<sup>&</sup>lt;sup>34</sup> <u>Id.</u> at 16-17.

COL.<sup>35</sup> The NRC Staff also claims there to be longstanding Commission precedent that whether "other permits may be required from other agencies is outside the scope of NRC proceedings, and those concerns are properly raised before those respective permitting authorities."<sup>36</sup> As a consequence, the NRC Staff concludes this contention is inadmissible.

We conclude Contention 1 is inadmissible because Petitioners have failed to allege facts or expert opinions to demonstrate that a genuine dispute exists with the COLA. Petitioners have failed to provide legal support for their claim that all federal, state, and local government agencies must issue all permits and authorizations related to STP Units 3 and 4 before the NRC may issue this COL. Likewise, the assertion that the Applicant might need to obtain a Part 72 license is irrelevant at this time, as a grant of the COL could be accompanied by grant of a Part 72 general license if the Applicant complies with certain conditions.<sup>37</sup> As discussed in Contention 6,<sup>38</sup> the Commission has determined that "the environmental impacts related to storage of spent fuel under part 72 have been generically evaluated under two previous rulemakings and the Commission's waste confidence proceedings. Thus, these potential environmental impacts need not be reassessed.<sup>39</sup> Therefore, Petitioners' assertions do not support admission of this contention.

### b. Contention 2

Petitioners state in Contention 2:

<sup>&</sup>lt;sup>35</sup> Staff Answer at 13-14.

 <sup>&</sup>lt;sup>36</sup> <u>Id.</u> at 14 (citing <u>PPL Susquehanna LLC</u> (Susquehanna Steam Electric Station, Units 1 & 2), CLI-07-25, 66 NRC 101, 107 (2007); <u>Hydro Res., Inc.</u> (2929 Coors Road Suite 101, Albuquerque, NM 87120), CLI-98-16, 48 NRC 119, 121 (1998)). Although not critical to the disposition of this contention, these cases do not enable the NRC Staff to disregard the contents of such permits. In the context of NEPA, the NRC is obligated to study matters that may be far afield of its primary mission, including the environmental impacts related to the permits and licenses issued by other governmental agencies. 10 C.F.R § 51.71(d) and n.3 and Part 51 App. A § 5; <u>see also Natural Res. Def. Council v. Morton</u>, 458 F.2d 827, 834-36 (D.C. Cir. 1972).
 <sup>37</sup> See 10 C.F.R. § 72.210; <u>see also</u> 10 C.F.R. § 72.212(a)(2).

 $<sup>\</sup>frac{38}{38}$  See infra text acc. notes 116-28.

<sup>&</sup>lt;sup>39</sup> Storage of Spent Fuel in NRC-Approved Storage Casks at Power Reactor Sites, 55 Fed. Reg. 29,181, 29,188 (1990).

The Applicant's COLA is incomplete because it fails to include the requirements of 10 C.F.R. § 52.80(b) under which the Applicant must submit a description and plans for implementation of the guidance strategies intended to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities assuming the large loss of areas of the plant due to large-scale explosions/ fires as required by 10 C.F.R. § 50.54(hh)(2).<sup>40</sup>

This is a contention of omission alleging that the COLA does not contain the information required by 10 C.F.R. § 52.80(d), which became effective May 26, 2009.<sup>41</sup> Petitioners also allege that the Design Control Document (DCD) for the ABWR contains inadequate safety evaluations.<sup>42</sup> During oral argument, Petitioners clarified that they were not challenging the DCD, but merely pointing out that the DCD was not an adequate response to the new regulation. Petitioners stated, "in our judgment the underlying DCD simply was not adequate to the task of addressing the particular provision of the new regulatory requirement."<sup>43</sup>

The Applicant argues for the rejection of this contention on the basis that, as of the date

of its response, the rule was not yet in effect.<sup>44</sup> Further, the Applicant claims that, by the time

the rule became effective, it would have submitted the subject information, rendering the

contention moot.45

The NRC Staff initially agreed that this contention was admissible in part as a contention

of omission with respect to the missing information required by 10 C.F.R. § 52.80.46 However,

the NRC Staff asserts that other issues addressed by the contention are inadmissible because

the "Petitioners do not demonstrate that the issues raised are within the scope of this

proceeding and impermissibly attack a Commission rule."47

<sup>&</sup>lt;sup>40</sup> Petition at 13.

 <sup>&</sup>lt;sup>41</sup> Final Rule, Power Reactor Security Requirements, 74 Fed. Reg. 13,926 (Mar. 27, 2009).
 <sup>42</sup> Petition at 14. This is a reference to the generic DCD for the ABWR which is defined in 10 C.F.R. Part 52, App. A (II)(A) as "the document containing the Tier 1 and Tier 2 information and generic technical specifications that is incorporated by reference into this appendix."
 <sup>43</sup> Tr. at 36.

<sup>&</sup>lt;sup>44</sup> STP Answer at 18.

<sup>&</sup>lt;sup>45</sup> Id. at 19.

<sup>&</sup>lt;sup>46</sup> Staff Answer at 16.

<sup>&</sup>lt;sup>47</sup> <u>Id.</u> at 17.

On May 26, 2009, the Applicant submitted its Mitigative Strategies Report, and claims that, as a consequence, Petitioners' Contention 2 is rendered moot.<sup>48</sup> During oral argument, the NRC Staff changed its position on admissibility because "the applicant has submitted information to comply with the rule, so the staff's position at this point today is that the contention as a whole is inadmissible."<sup>49</sup> Prior to oral argument, Petitioners had not been afforded an opportunity to view Applicant's new information due to its proprietary nature. However, Petitioners, the Applicant, and the NRC Staff worked together to establish appropriate access,<sup>50</sup> and on July 1, 2009, the Board issued a protective order permitting Petitioners access to the subject material.<sup>51</sup>

After reviewing this new information, Petitioners filed a Notice, and supporting Brief,

stating that they do not view this contention to be moot.<sup>52</sup> Specifically, Petitioners assert "[t]he

submittal is deficient because it omits a reference to the magnitude of the fires and explosions"<sup>53</sup>

and because it contains "incomplete regulatory commitments that bear on the efficacy of the

mitigative strategies."54

In reply to Petitioners' brief,<sup>55</sup> the Applicant asserts that because the new material

"[a]ddresses the [r]equirements of Sections 52.80(d) and 50.54(hh)(2),"<sup>56</sup> and because

<sup>&</sup>lt;sup>48</sup> See STP Units 3 & 4 Letter, Submittal of Mitigative Strategies Report – 10 C.F.R. § 52.80(d) (May 26, 2009) (ADAMS Accession No. ML091470724). The Mitigative Strategies Report is not, however, publicly available because the Applicant maintains it contains sensitive unclassified non-safeguards information (SUNSI).

<sup>&</sup>lt;sup>49</sup> Tr. at 31

<sup>&</sup>lt;sup>50</sup> Tr. at 33-34.

<sup>&</sup>lt;sup>51</sup> <u>See</u> Licensing Board Memorandum and Order (Protective Order Governing the Disclosure of Protected Information) (July 1, 2009) (unpublished).

<sup>&</sup>lt;sup>52</sup> <u>See</u> Letter from Robert Eye to J. Gibson (July 14, 2009); Petitioners' Brief Regarding Contention Two's Mootness (July 21, 2009) [hereinafter Petitioners' Brief].

<sup>&</sup>lt;sup>53</sup> Petitioners' Brief at 2.

<sup>&</sup>lt;sup>54</sup> <u>Id.</u> at 7.

<sup>&</sup>lt;sup>55</sup> <u>See</u> STP Nuclear Operating Company's Response to Petitioners' Brief Regarding Mootness of Contention 2 (July 27, 2009) [hereinafter Applicant Response to Brief].

 $<sup>^{56}</sup>$  <u>Id.</u> at 4. Section 50.54(hh)(2) requires licensees to develop, implement and maintain procedures to address potential aircraft threats and large area fires and explosions. Section 52.80(b) requires applicants to describe how they will implement 10 C.F.R. § 50.54(hh)(2) and to develop a plan to do so.

Petitioners "fail to identify any legally required information that has been omitted from the Mitigative Strategies Report,"<sup>57</sup> the contention is moot.

We agree with Applicant that Contention 2 is now moot based on the Applicant's filing of May 26, 2009. Whenever a contention of omission encompasses issues that are addressed completely in materials the Applicant subsequently files, the contention is rendered moot.<sup>58</sup> Here, Petitioners alleged the Applicant's COLA was incomplete because it failed to include what is required by 10 C.F.R. § 52.80(b). While this was true at the time the contention was filed, by virtue of the Applicant's timely filing of its description and plans as required under 10 C.F.R. § 52.80(b), its COLA no longer suffers from an omission on this subject. Therefore, Contention 2 is inadmissible as moot.<sup>59</sup>

# c. Contention 3

Petitioners state in Contention 3:

The STP Environmental Report erroneously assumes that there will be high-level waste/spent nuclear fuel disposal capacity available at a federal site, presumably Yucca Mountain, Nevada. But even if Yucca Mountain is available as a federal repository for spent nuclear fuel and high-level nuclear waste, its capacity would be reached by waste from the current generation of operating reactors. Therefore, the spent nuclear fuel and high-level waste generated by STP Units 3 and 4 would have to be dispositioned to a subsequent repository that has been neither sited nor authorized.<sup>60</sup>

Petitioners challenge Applicant's assertion in ER Section 5.7.6 that a federal high-level

waste repository will house the high-level waste that STP Units 3 and 4 will generate.<sup>61</sup>

<sup>&</sup>lt;sup>57</sup> Applicant Response to Brief at 5.

<sup>&</sup>lt;sup>58</sup> <u>Duke Energy Corp.</u> (McGuire Nuclear Station, Unit 1, Catawba Nuclear Station, Units 1 & 2), CLI-02-28, 56 NRC 373, 383 (2002).

<sup>&</sup>lt;sup>59</sup> Our rejection of Contention 2 as moot in no way affects our analysis of the new filings received by the Board on August 14, 2009. We agree with the NRC Staff that the Commission has not established any prerequisite, such as assessment of the information submitted, that must be met before a finding of mootness can be made. Rather, submittal of the information is the basis for the finding of mootness, while the adequacy of the information submitted may be the subject of a new or amended contention. NRC Staff's Reply to Petitioners' Brief Regarding Contention Two's Mootness (July 30, 2009) at 3 n.5 (citing <u>McGuire/Catawba</u>, CLI-02-28, 56 NRC at 383 (internal citations omitted)).

Petitioners claim the Applicant's assertion — that its high level waste is destined for a federal high-level waste repository — is based on the "Waste Confidence Rule," in 10 C.F.R. § 51.23. Petitioners argue that Applicant cannot rely on the Waste Confidence Rule for three reasons: (1) the Waste Confidence Rule does not apply to new reactors;<sup>62</sup> (2) even if the Waste Confidence Rule does apply to new reactors, were a high-level waste repository to be constructed at Yucca Mountain, it would be filled to capacity by the time the Applicant needed to dispose of any high-level waste generated by proposed STP Units 3 and 4;<sup>63</sup> and (3) the Waste Confidence Rule is premised solely on planned capacity of Yucca Mountain, and it is unreasonable to assume there will be a second federal repository that could accept high-level waste generated by STP Units 3 and 4.<sup>64</sup> To demonstrate the "material issues related to spent nuclear fuel and other high-level wastes," Petitioners provide reports authored by two of Petitioners' experts, Dr. Arjun Makhijani and Dr. Gordon Thompson.<sup>65</sup> Petitioners conclude by stating that the Applicant should revise its ER to eliminate any assumption that a high-level waste repository will be available to receive waste from STP Units 3 and 4.<sup>66</sup>

Applicant responds that the breadth and scope of the NRC's Waste Confidence Rule is so expansive that Petitioners' contention is barred as an impermissible challenge to it.<sup>67</sup> In support of its argument, the Applicant notes that other licensing boards have invoked 10 C.F.R. § 2.335(a) in rejecting nearly identical contentions that those boards deemed to be

<sup>&</sup>lt;sup>62</sup> See id. at 23-24; Tr. at 53-54, 69-70.

 <sup>&</sup>lt;sup>63</sup> See Petition at 24-25, where Petitioners point to reports from the Department of Energy (DOE) and the Nuclear Waste Technical Review Board that include calculations regarding the amount of waste that will need to be stored at Yucca Mountain; Tr. at 52.
 <sup>64</sup> See Petition at 25.

<sup>&</sup>lt;sup>65</sup> Id. at 25-26; Report by Dr. A. Makhijani, Comments of the Institute for Energy and Environmental Research on the U.S. Nuclear Regulatory Commission's Proposed Waste Confidence Rule Update And Proposed Rule Regarding Environmental Impacts of Temporary Spent Fuel Storage (Feb. 6, 2009); Report by Dr. G. Thompson, Environmental Impacts of Storing Spent Nuclear Fuel and High-Level Waste from Commercial Nuclear Reactors: A Critique of NRC's Waste Confidence Decision and Environmental Impact Determination (Feb. 6, 2009); Report by Dr. G. Thompson, The U.S. Effort to Dispose of High-Level Radioactive Waste (2008).

<sup>&</sup>lt;sup>66</sup> <u>Id.</u> at 26; Tr. at 24-25.

<sup>&</sup>lt;sup>67</sup> STP Answer at 20-21.

impermissible challenges to NRC's Waste Confidence Rule, as well as to ongoing rulemaking regarding the Waste Confidence Rule.<sup>68</sup> The Applicant further asserts that this contention must be rejected because Petitioners failed to obtain a waiver<sup>69</sup> from the application of this rule.<sup>70</sup> Finally, Applicant claims that Petitioners' expert, Dr. Makhijani, provides insufficient factual support for this contention.<sup>71</sup>

The NRC Staff likewise asserts this contention is an impermissible challenge to the

Waste Confidence Rule and must be found inadmissible in accordance with numerous licensing

board decisions.<sup>72</sup> The NRC Staff further argues that the contention is an impermissible

challenge to an ongoing rulemaking, in light of the fact the Commission has "published

proposed revisions to the WCD [Waste Confidence Decision] and the Waste Confidence

Rule."73

To begin, to the extent Contention 3 amounts to an attack on the Waste Confidence

Rule at 10 C.F.R. § 51.23(a), which addresses the long-term storage of spent fuel and high-

level waste generated by nuclear reactors,<sup>74</sup> we are compelled to conclude it is inadmissible.

<sup>&</sup>lt;sup>68</sup> Waste Confidence Decision Update, 73 Fed. Reg. 59,551 (Oct. 9, 2008).

<sup>&</sup>lt;sup>69</sup> A party seeking such a waiver must demonstrate special circumstances. <u>See</u> 10 C.F.R. § 2.335(b).

<sup>&</sup>lt;sup>70</sup> STP Answer at 22 & n.97.

<sup>&</sup>lt;sup>71</sup> <u>Id.</u> at 23. If Applicant is correct in its claim that Petitioners' claims are fatally flawed because Petitioners have made impermissible attacks on the Waste Confidence Rule, we need not reach whether Dr. Makhijani's report contains insufficient factual support for this contention. We also note that the Applicant also rejects Petitioners' reliance on Dr. Makhijani's report as an impermissible attack on ongoing rulemaking — which is, in essence, merely another way of stating that this contention is an impermissible attack on the amendment to the Waste Confidence Rule. Applicant does not address the statement of Dr. Thompson.

<sup>&</sup>lt;sup>72</sup> <u>Id.</u> at 20-21.

<sup>&</sup>lt;sup>73</sup> Staff Answer at 21-22; Tr. at 54-57.

<sup>&</sup>lt;sup>74</sup> The current version of the Waste Confidence Rule states, at subsection (a): 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

Under 10 C.F.R. § 2.335(a), a licensing board may not admit any contention that challenges a Commission rule or regulation, unless a waiver is requested under 10 C.F.R. § 2.335(b). In the present case, Petitioners have not requested a waiver, nor do they allege that any "special circumstances" warrant such a waiver.

Petitioners' central arguments are essentially (1) that the Waste Confidence Rule does not apply to reactors that were not in operation at the time the Waste Confidence Rule was amended in 1999; (2) that, even assuming that the Waste Confidence Rule does apply to new reactors, there would be insufficient capacity to accommodate waste from STP Units 3 and 4; and (3) that the ER is therefore in error in its "assumption" that a repository will be available.

Regarding the question whether the phrase "any reactor" as used in 10 C.F.R. § 51.23(a) refers to any new reactor, we note that the Commission in its 1990 review of the Waste Confidence Rule stated the following:

The availability of a second repository would permit spent fuel to be shipped offsite well within 30 years after expiration of [the current fleet of] reactors' [operating licenses]. The same would be true of spent fuel discharged from any new generation of reactor designs.<sup>75</sup>

Viewed in isolation, this statement could be read to suggest that the phrase "any reactors"

would encompass future reactors only in the event that a second repository would be available

within thirty years thereafter. Further confusion in this regard was added in 2007, when the

NRC specifically amended subsections 51.23(b) and (c) to clarify that this part of the Waste

Confidence Rule encompasses COL applications.<sup>76</sup> However, because subsection 51.23(a)

was not amended, the implication is that "any reactors" may not include reactors that had not

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>75</sup> Waste Confidence Decision Review, 55 Fed. Reg. 38,474, 38,504 (Sept. 8, 1990). These findings were reaffirmed in the Commission's review of the Waste Confidence Decision. Waste Confidence Decision Review: Status, 64 Fed. Reg. 68,005, 68,007 (Dec. 6, 1999).

<sup>76</sup> Final Rule, Licenses, Certifications, and Approvals for Nuclear Power Plants, 72 Fed. Reg. 49,352, 49,429 (Aug. 28, 2007).

<sup>10</sup> C.F.R. § 51.23(a).

been constructed at that time. Fortunately, the Commission has an opportunity to eliminate this confusion because the Rule is again under review at this time. In its proposed rule, issued on October 9, 2008, the Commission stated:

[T]he Commission is now preparing to conduct a significant number of proceedings on combined construction permits and operating licenses (COL) applications for new reactors. The Commission anticipates that the issue of waste confidence may be raised in those proceedings and desires to take a fresh look at its Waste Confidence findings to take into account developments since 1990.77

Based on this statement, it is clear that the Commission is currently assessing the applicability of the Waste Confidence Rule to "all reactors" - both current and anticipated. And as the Commission has stated "[i]t has long been agency policy that Licensing Boards 'should not accept in individual license proceedings contentions which are (or are about to become) the subject of general rulemaking by the Commission."78

Petitioners have brought to our attention statements from United States government

officials suggesting that the Yucca Mountain high-level waste repository will not be built.<sup>79</sup> Many

of these statements post-date the very board decisions that the Applicant and the NRC Staff

claim support their position.<sup>80</sup> In spite of these statements from government officials outside the

NRC, however, the fact remains that they do not enable this Board to disregard the plain

language of 10 C.F.R. § 51.23. Accordingly, we conclude that Petitioners' Contention 3 is not

admissible.

#### d. **Contention 4**

Petitioners state in Contention 4:

The STP Environmental Report assumes that there will be no significant releases to the environment from management of spent nuclear fuel and high-level wastes. This is a false assumption that is contradicted, among other sources, by

<sup>&</sup>lt;sup>77</sup> 73 Fed. Reg. at 59,553.

<sup>&</sup>lt;sup>78</sup> Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, & 3), CLI-99-11, 49 NRC 328, 345 (1999). <sup>79</sup> Petition at 24-25; Tr. at 51.

<sup>&</sup>lt;sup>80</sup> The majority of licensing board decisions were made prior to March 5, 2009, when United States Secretary of Energy Steven Chu made statements that Petitioners view in conflict with the Waste Confidence Rule. See Petition at 25.

the Department of Energy' [sic] Final Environmental Impact Statement on Yucca Mountain that significant radioactivity releases from Yucca Mountain would occur over time. Even DOE's License Application estimates non-zero releases.<sup>81</sup>

In this contention, Petitioners challenge Applicant's conclusion in Section 5.7.6 of the ER that there will be "no significant releases of radioactivity to the environment related to management of radioactive waste."<sup>62</sup> In contravention of the Applicant's statement that STP Units 3 and 4 will release insignificant radioactivity, Petitioners claim that both the Department of Energy (DOE) (in its high-level waste license application documents)<sup>83</sup> and the Environmental Protection Agency (EPA) (in its regulations)<sup>84</sup> recognize "that significant releases from a Yucca Mountain repository would occur over time."<sup>85</sup> Petitioners claim that both the DOE license application and the DOE final EIS for the proposed DOE Yucca Mountain high-level waste repository, estimate "non-zero releases" and doses "in excess of the EPA limit of 100 mrem beyond 10,000 years."<sup>86</sup> Petitioners claim these statements invalidate the Applicant's conclusion of "no significant releases" for radioactive waste management and that, as a consequence, the ER must include an appropriate analysis of the health and safety impacts of waste management related to STP Units 3 and 4.<sup>87</sup>

Applicant claims this contention amounts to an impermissible attack on NRC rules,

insofar as ER Section 5.7.6 is a direct application of Table S-3 in 10 C.F.R. § 51.51,<sup>88</sup> which

provides environmental impact data for the uranium fuel cycle. Specifically, the Applicant

<sup>&</sup>lt;sup>81</sup> Petition at 26.

<sup>&</sup>lt;sup>82</sup> <u>Id.</u> at 26.

<sup>&</sup>lt;sup>83</sup> See Department of Energy; Notice of Acceptance for Docketing of a License Application for Authority to Construct a Geologic Repository at a Geologic Repository Operations Area at Yucca Mountain, NV, 73 Fed. Reg. 53,284 (Sept. 15, 2008).

<sup>&</sup>lt;sup>84</sup> <u>See</u> EPA: Final Rule, Public Health and Environmental Radiation Protection Standards for Yucca Mountain, NV, 73 Fed. Reg. 61,256, 61,271-73 (Oct. 15, 2008).

<sup>&</sup>lt;sup>85</sup> Petition at 26-27 (citing U.S. Department of Energy, Office of Civilian Radioactive Waste Management, NWTRB Repository Panel Meeting: Postclosure Defense and Design Selection Process (Jan. 25, 1999)).

<sup>&</sup>lt;sup>86</sup> <u>Id.</u> at 27.

<sup>&</sup>lt;sup>87</sup> Id.; Tr. at 80-82.

 $<sup>^{88}</sup>$  STP Answer at 24; Tr. at 81.

contends that NRC rules<sup>89</sup> require it to "take Table S-3 . . . as the basis for evaluating the contribution of the environmental effects of . . . management of . . . high-level wastes related to uranium fuel cycle activities,"<sup>90</sup> and any challenge to this regulation is impermissible as a violation of 10 C.F.R. § 2.335(a).<sup>91</sup> Additionally, the Applicant claims that Petitioners' efforts to support its contention with statements from DOE miss the point, <u>i.e.</u>, there is nothing inconsistent between the allowable radioactivity releases under Table S-3 and any DOE statement that radioactive waste management at Yucca Mountain will produce "no significant release" of radioactivity.<sup>92</sup>

The NRC Staff similarly contends this contention is an impermissible challenge to the

"NRC's generic determination, codified in Table S-3, 10 C.F.R. § 51.51(b), that there will be no

releases from a geologic repository,"93 absent a waiver, which Petitioners did not seek here.94

In light of the fact this contention mainly repeats and builds upon assertions made in

Contention 3, 10 C.F.R. § 2.335 requires that we not admit it because it is an impermissible

challenge to the Waste Confidence Rule. As was the case with Contention 3,95 mere

statements of government officials are insufficient to overturn 10 C.F.R. § 51.23. In addition to

the Commission's determination that there will be a national geologic repository available for the

<sup>&</sup>lt;sup>89</sup> 10 C.F.R. § 51.51.

<sup>&</sup>lt;sup>90</sup> STP Answer at 24 (quoting 10 C.F.R. § 51.51(a) (internal quotations omitted)).

<sup>&</sup>lt;sup>91</sup> <u>See</u> Tr. at 83-84.

<sup>&</sup>lt;sup>92</sup> STP Answer at 24-25.

<sup>&</sup>lt;sup>93</sup> Staff Answer at 23.

<sup>&</sup>lt;sup>94</sup> <u>Id.</u> at 23-24. The NRC Staff also asserts a strained interpretation of NRC's pleading rules, claiming that Petitioners' references in support of this contention fail to explain how they support the contention, asserting, "mere mention of a document without providing its contents or an explanation of its significance cannot support admissibility of the contention." <u>Id.</u> at 24-25 (citing <u>USEC, Inc.</u> (American Centrifuge Plant), LBP-05-28, 62 NRC 585, 597 (2005)). As the Commission has emphasized, the contention requirements were never intended to be turned into a "fortress to deny intervention." <u>Oconee</u>, CLI-99-11, 49 NRC at 335 (citing <u>Philadelphia</u> <u>Elec. Co.</u> (Peach Bottom Atomic Power Station, Units 2 & 3), ALAB-216, 8 AEC 13, 21 (1974)). Based on the numerous substantive deficiencies in this contention that are discussed in the succeeding text, we need not reach this argument but remind the NRC Staff that the NRC's pleading rules require merely that a petitioner provide a simple nexus between the contention and the referenced factual or legal support. <u>See</u> 10 C.F.R. § 2.309(f)(1)(v). They require nothing more.

<sup>&</sup>lt;sup>95</sup> Petitioners also failed to obtain a waiver with Contention 4.

storage of high-level waste, 10 C.F.R. § 51.51, Table S-3 is definitive with respect to radioactivity releases from such a geologic repository, and Applicant asserts it has applied that Table to STP Units 3 and 4.<sup>96</sup> Petitioners have not challenged the Applicant's use of Table S-3, but seek to challenge the table itself. Accordingly, Contention 4, which directly challenges these rules,<sup>97</sup> will not be admitted in accordance with 10 C.F.R. § 2.335.

# e. Contention 5

Petitioners state in Contention 5:

Because no spent nuclear fuel and high-level radioactive waste repository site is now available and future availability of such site is problematic, the COLA adjudication should consider the environmental consequences and public health impacts from long-term storage of high-level waste and spent fuel on site at STP Units 3 and 4.<sup>98</sup>

Similar to Contention 4, Petitioners claim that because ER Section 5.7.6 uses the phrase

"uncertainty associated with the high-level waste and spent fuel disposal component of the fuel

cycle," and the Applicant should conduct an analysis of the "long-term environmental and public

health consequences of high-level waste and spent fuel remaining on-site indefinitely."99

Petitioners contend this analysis should include the possibility the NRC will require the Applicant

to obtain a 10 C.F.R. Part 72 license for onsite storage of high-level waste related to operation

of STP Units 3 and 4.<sup>100</sup> At least part of Petitioners' claim that the NRC will require the

Applicant to obtain an onsite storage license is based on a notation in ER Figure 1.1-1,<sup>101</sup> that a

"dry cask storage facility is anticipated."<sup>102</sup> Finally, Petitioners claim the ER is deficient for failing

<sup>&</sup>lt;sup>96</sup> <u>See</u> 10 C.F.R. § 51.51(b). By way of explanation of this zero yield, the Applicant asserts that prior to disposal of any spent fuel waste, the rule assumes that all gaseous and volatile constituents (that would give rise to any radioactive releases) in the waste would have been removed. <u>See</u> Tr. at 85.

 <sup>&</sup>lt;sup>97</sup> Petitioners might have secured admission of this contention if they had challenged whether the Applicant properly applied this table to STP Units 3 and 4, but Petitioners did not do so.
 <sup>98</sup> Petition at 28.

<sup>&</sup>lt;sup>99</sup> <u>Id.</u> at 28; Tr. at 58.

<sup>&</sup>lt;sup>100</sup> See Petition at 28.

<sup>&</sup>lt;sup>101</sup> See id. (citing ER Section 1.1-5).

<sup>&</sup>lt;sup>102</sup> Petition at 28.

to include an analysis of the health and safety impacts of a radiological incident relating to onsite high-level waste storage.<sup>103</sup>

Petitioners claim the ER fails to address either the potential for terrorist attacks or the possibility of accidents arising from the Applicant's possible use of long-term dry cask storage.<sup>104</sup> In support of this claim, Petitioners refer to Dr. Thompson's declaration in support of their assertion that "[t]he COLA should assume that the dry cask storage units will remain on [STP's] site indefinitely and make radiation exposure projections accordingly."<sup>105</sup>

Applicant asserts this contention, like Petitioners' Contention 3, should be dismissed because it constitutes an impermissible attack on the Waste Confidence Rule.<sup>106</sup> In support of this claim, the Applicant asserts that 10 C.F.R. § 51.23(b) provides that an applicant need not consider the environmental impacts of "spent fuel storage in reactor facility storage pools or independent spent fuel storage installations (ISFSI) for the period following the term of the . . . reactor combined license.<sup>107</sup> Applicant contends that, absent a waiver under Section 2.335(b), this contention should be rejected.

The NRC Staff likewise claims this contention is an impermissible attack on the Waste Confidence Rule.<sup>108</sup> The NRC Staff further asserts that Petitioners fail to provide factual or legal support for their claims with respect to the dangers of long-term dry cask storage.<sup>109</sup> Finally, the NRC Staff claims this part of this contention is premature in that the Applicant need not apply for a Part 72 license at this point in time, if at all.<sup>110</sup>

Part of this contention concerns the possible need for the Applicant to obtain a Part 72 license in the future and to evaluate the possibility of long-term dry cask storage solutions that it

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<sup>&</sup>lt;sup>103</sup> <u>Id.</u> at 28-29.

<sup>&</sup>lt;sup>104</sup> <u>Id.</u> at 29.

 $<sup>\</sup>frac{105}{\text{Id.}}$  The original sentence had erroneously indicated the Applicant was Comanche Peak instead of STP. Comanche Peak is a proposed COL in North Texas.

<sup>&</sup>lt;sup>106</sup> STP Answer at 26-27.

<sup>&</sup>lt;sup>107</sup> Id. at 27 (quoting 10 C.F.R. § 51.23(b) (internal quotations omitted)).

<sup>&</sup>lt;sup>108</sup> Staff Answer at 26-27; Tr. at 58-59.

<sup>&</sup>lt;sup>109</sup> Staff Answer at 28.

<sup>&</sup>lt;sup>110</sup> <u>Id.</u> at 28-29.

might someday choose to pursue. This claim is clearly incorrect as issuance of a COL could be accompanied by a Part 72 general license, subject to certain conditions,<sup>111</sup> permitting Applicants to operate an ISFSI onsite without addressing any possible environmental impacts of any such onsite ISFSI.<sup>112</sup>

Finally, Petitioners claim that the Applicant must undertake an extensive analysis of the long-term health and environmental effects of onsite high-level waste storage. This is a direct challenge to the Commission's final rulemaking regarding ISFSIs,<sup>113</sup> where the Commission stated:

The Commission has determined under the National Environmental Policy Act of 1969, as amended, and the Commission's regulations in subpart A of 10 C.F.R. part 51, that this rule, if adopted, would not be a major Federal action significantly affecting the quality of the human environment, and therefore an Environmental Impact Statement (EIS) is not required.<sup>114</sup>

Further, "the environmental impacts related to storage of spent fuel under part 72 have

been generically evaluated under two previous rulemakings and the Commission's waste

confidence proceedings. Thus, these potential environmental impacts need not be

reassessed."<sup>115</sup> We conclude this contention, in common with Contentions 3 and 4, is

inadmissible insofar as it is an impermissible attack on agency regulations and, as such,

presents issues that are outside the scope of this proceeding.

<sup>&</sup>lt;sup>111</sup> 10 C.F.R. § 72.210 in its entirety states, "[a] general license is hereby issued for the storage of spent fuel in an independent spent fuel storage installation at power reactor sites to persons authorized to possess or operate nuclear power reactors under 10 C.F.R. part 50 or 10 C.F.R. part 52." See also 10 C.F.R. § 72.212(a)(2).

<sup>&</sup>lt;sup>112</sup> During oral argument regarding onsite storage of waste and the possibility that the Applicant might need a Part 72 permit, it became clear that (1) obtaining a COL is tantamount to obtaining authorization to store spent fuel onsite in an ISFSI if Applicant follows certain conditions; and (2) the Commission has determined that neither the Applicant nor the NRC Staff needs to address further environmental impacts of ISFSIs if NRC approved casks are used because the Commission has already done so generically. See Tr. at 73-74; 55 Fed. Reg. at 29,181. <sup>113</sup> 55 Fed. Reg. 29,181.

<sup>&</sup>lt;sup>115</sup> Id. at 29,188.

#### f. Contention 6

Petitioners state in Contention 6:

The COLA adjudication should consider the public health impacts and environmental consequences of requiring governmental units to become the custodian of high-level waste and spent nuclear fuel at the STP site after the operating license has terminated and post-closure activities have been completed.<sup>116</sup>

Building on Petitioners' assertions in previous contentions<sup>117</sup> that a federal repository will be unavailable for high-level waste storage, Petitioners assert that the Applicant must of necessity store waste from STP Units 3 and 4 onsite. As a consequence, Petitioners argue the COLA must analyze the impacts of a government entity managing onsite high-level waste<sup>118</sup> from STP Units 3 and 4 because the only entity capable of managing such waste on a long-term scale is a unit of government.<sup>119</sup> Specifically, Petitioners claim the ER is deficient for failing to consider "what governmental entity will actually have legal ownership of the spent fuel and highlevel waste after the operating license has terminated and post-closure activities have ceased"<sup>120</sup> and that the ER should "quantify the costs related to the long-term custody in ownership of spent nuclear fuel and high-level radioactive waste that remains on site at the termination of an operational license and post-closure activities."<sup>121</sup>

As it argued in seeking to dismiss Contentions 3 and 5, Applicant claims that Contention 6 challenges the Waste Confidence Rule and is therefore inadmissible.<sup>122</sup> Applicant asserts that Petitioners' contention is an impermissible attack on the Waste Confidence Rule because it questions "(1) whether a federal repository will be available for high-level waste and spent fuel

- <sup>120</sup> Id.
- $\frac{121}{100} \frac{100}{100}$  at 31.

<sup>&</sup>lt;sup>116</sup> Petition at 30.

<sup>&</sup>lt;sup>117</sup> <u>See supra</u> Subsections c, d, and e.

<sup>&</sup>lt;sup>118</sup> See Petition at 30.

<sup>&</sup>lt;sup>119</sup> See id.

 $<sup>^{122}</sup>$  STP Answer at 28-29.

generated at STP Units 3 and 4; and (2) the environmental impacts of onsite spent fuel storage."<sup>123</sup>

The NRC Staff objects to the admission of this contention on the grounds that Petitioners have failed to provide any support or "regulatory requirement for analysis of environmental or health impacts of onsite spent fuel storage in the time frame after 'post-closure activities of the license have been completed."<sup>124</sup> The NRC Staff further objects to Petitioners' assertion that a governmental entity would be required to take possession and ownership of onsite spent fuel, claiming that this matter is outside the permissible scope of this proceeding because it is an impermissible challenge to the Waste Confidence Rule, 10 C.F.R. § 51.23, in violation of Section 2.335.<sup>125</sup>

To the extent this builds upon Petitioners' assertion that a high-level waste repository is unavailable, it is clearly inadmissible, as discussed in our ruling on Contentions 3, 4, and 5. Absent a waiver under Section 2.335, which Petitioners failed to obtain, this contention must be rejected, for it raises matters outside the scope of this proceeding. Further, with respect to Petitioners' claims that the Applicant has failed to undertake additional analysis of post-closure conditions, Petitioners have failed to point to any legal authority or regulatory requirement mandating such a study.

Petitioners likewise fail to provide any legal authority or regulatory requirement supporting their proposition that the ER should "quantify the costs related to the long-term custody in ownership of spent nuclear fuel and high-level radioactive waste that remains onsite at the termination of an operational license and post-closure activities."<sup>126</sup> Petitioners' assertion

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<sup>&</sup>lt;sup>123</sup> <u>Id.</u> at 29.

<sup>&</sup>lt;sup>124</sup> Staff Answer at 31. The NRC Staff asserts that, under 10 C.F.R. § 110(i), when a nuclear power plant ceases operations, the owner must apply for a license to terminate, which cannot be granted until the NRC is satisfied that the plant has been properly dismantled and decommissioned so that residual radiation meets established rules, and that no spent fuel or high-level wastes would be onsite. See Tr. at 61.

<sup>&</sup>lt;sup>125</sup> Staff Answer at 32-33.

<sup>&</sup>lt;sup>126</sup> Id. at 31.

that the ER fails to include an analysis of the impacts of a governmental entity managing long-

term storage of high-level waste onsite and cost quantifications of such management fails to

create a genuine dispute that would warrant admission of this contention.<sup>127</sup> In all other

respects, this contention is outside the scope of this proceeding and is an impermissible

challenge to agency regulations under 10 C.F.R. § 51.23.<sup>128</sup>

# g. Contention 7

Petitioners state in Contention 7:

The COLA should consider environmental impacts and public health consequences of accidents and releases related to off-site radioactive waste disposal.<sup>129</sup>

In its entirety, this contention explains:

The STP Environmental Report assumes that there will be no significant radioactive releases to the environment related to off-site disposal of the radioactive waste streams that originate at [STP] Units 3 and 4. STP Environmental Report, Sec. 5.7-8. The COLA should not adopt this assumption. The COLA should fully consider the public health and environment consequences of major releases to the environment of radioactive materials as a result of off-site disposal activities. The off-site releases could originate from onsite processing, transportation accidents, off-site processing, and long-term releases from the disposal site because of either improper or inadequate waste site characterization, natural events such as earthquakes, and intentional or unintentional releases. Irrespective of the cause of the releases such should be considered for the impacts to the environment and public health consequences.<sup>130</sup>

Essentially, Petitioners are maintaining in this contention that the ER must evaluate the

effects of releases of waste due to onsite processing, transportation accidents, off-site

processing and long-term waste management at the disposal site.<sup>131</sup>

Applicant maintains this contention should be denied because it constitutes an attack on

10 C.F.R. § 51.51, because Petitioners supply no support for the contention, and because it fails

<sup>&</sup>lt;sup>127</sup> 10 C.F.R. § 2.309(f)(1)(vi).

<sup>&</sup>lt;sup>128</sup> Id. § 2.309(f)(1)(iii).

<sup>&</sup>lt;sup>129</sup> Petition at 31.

<sup>&</sup>lt;sup>130</sup> <u>Id.</u>

<sup>&</sup>lt;sup>131</sup> <u>See</u> Tr. at 88-90.

to raise a genuine dispute on a material issue of fact or law.<sup>132</sup> Applicant points out that, as was the case with regard to Petitioners' arguments in Contention 4, the NRC regulations and Table S-3<sup>133</sup> preclude this Board from considering Petitioners' grievances with long-term waste disposal and the effects of the uranium fuel cycle. Moreover, the Applicant claims that the COLA considers the effects of waste precisely as prescribed by 10 C.F.R. § 51.51. Consequently, Applicant maintains, Petitioners' only remedy to challenge this rule at this point in time would be to obtain a waiver from 10 C.F.R. § 51.51 and Table S-3, which Petitioners have not done.<sup>134</sup> Applicant further argues that this contention fails to say how the ER is deficient and fails to supply any information to demonstrate its deficiency.<sup>135</sup> Applicant claims that the environmental consequences of transportation accidents are described in ER Sections 3.8, 5.11 and 7.4.<sup>136</sup> Applicant also asserts that Petitioners do not challenge Applicant's conclusions in the ER that the impacts of waste disposal and transportation are SMALL, and thus do not raise a genuine dispute with the COLA.<sup>137</sup>

The NRC Staff opposes admission of this contention for reasons nearly identical to those that Applicant asserts. The NRC Staff argues, as it did with Contention 4, that "the Commission has generically determined numerical values representing the environmental effects of the uranium fuel cycle" and so, in light of the fact Petitioners have failed to obtain a waiver from these regulations, this contention should be denied as an impermissible attack on Tables S-3 and S-4.<sup>138</sup> In addition, the NRC Staff maintains "[t]he Contention does not contain a specific

<sup>&</sup>lt;sup>132</sup> STP Answer at 30; Tr. at 87-88, 92.

<sup>&</sup>lt;sup>133</sup> STP Answer at 30-31.

<sup>&</sup>lt;sup>134</sup> Id.

<sup>&</sup>lt;sup>135</sup> Id.

<sup>&</sup>lt;sup>136</sup> <u>Id.</u> at 31 n.26; Tr. at 95. Petitioners provided no specific factual or legal refutation of this information either in their pleadings or during oral argument.

<sup>&</sup>lt;sup>137</sup> STP Answer at 31-32.

<sup>&</sup>lt;sup>138</sup> Staff Answer at 34.

statement of law or fact to be raised or controverted" insofar as Petitioners fail to point to any specific health consequences.<sup>139</sup>

The Board concludes this contention will not be admitted because it fails to satisfy the requirements of 10 C.F.R. § 2.309(f)(1)(iii) and (vi). As both the Applicant and the NRC Staff assert, this contention is almost entirely<sup>140</sup> a challenge to the NRC's classification of the impacts of an off-site disposal, which is governed by 10 C.F.R. § 51.51, Table S-3. We agree with Applicant that Petitioners "do not dispute that the environmental impacts of radioactive waste disposal or transportation are SMALL"<sup>141</sup> — and is thus outside the scope of this proceeding. Consistent with current NRC regulations,<sup>142</sup> which indicate that the values for environmental impacts of waste disposal and transportation are SMALL,<sup>143</sup> Petitioners' assertion that the COLA should not adopt this assumption that the impacts are small, is an attack on NRC rules, not the Application. Accordingly, we conclude this contention is not admissible as not within the permissible scope of this proceeding.

<sup>&</sup>lt;sup>139</sup> <u>Id.</u> at 35-36.

<sup>&</sup>lt;sup>140</sup> Insofar as Petitioners seek to challenge transportation accidents that are beyond the scope of the rules, the NRC Staff asserts that Petitioners are impermissibly attacking Table S-4. <u>See</u> Tr. at 91-92. The NRC Staff is in error because, as the Applicant concedes at footnote 126 of its Answer, the core thermal power of STP Units 3 and 4 exceeds the criteria necessary for invoking Table S-4. Nevertheless, the Applicant asserts it has addressed all of such issues in Section 3.8, 5.11, and 7.4 of the ER, and because Petitioners did not challenge the content of these provisions, they have failed to raise a litigable dispute. <u>See</u> Tr. at 92-93.

<sup>&</sup>lt;sup>142</sup> 10 C.F.R. § 51.51, Table S-3 and 10 C.F.R. § 51.52, Table S-4.

<sup>&</sup>lt;sup>143</sup> In their pleadings, Petitioners asserted "[t]he STP Environmental Report assumes that there will be no significant radioactive releases to the environment related to off-site disposal of the radioactive waste streams that originate at [STP] Units 3 and 4. STP Environmental Report, Sec. 5.7-8." Petition at 31. The Applicant's Answer claims that the ER demonstrates these impacts will be "small." STP Answer at 32. During oral argument, Petitioners appeared to suggest that Applicant's characterization of these impacts as small was based on the Applicant's subjective assessment. See, e.g., Tr. at 59. However, Petitioners subsequently conceded that the source of Applicant's characterization was 10 C.F.R. § 51.53, Table S-4. See Tr. at 93-94; see also Tr. at 121, 127.

<sup>&</sup>lt;sup>144</sup> 10 C.F.R. § 2.309(f)(1)(iii).

### h. Contention 17

Petitioners state in Contention 17:

The Applicant's calculations of radiation doses to the general public as a result of consuming radioactively contaminated fish and invertebrates are incorrect. The calculations are done using the LADTAP II model which is obsolete and systematically underestimates doses to the public.<sup>145</sup>

In support of this contention, Petitioners refer to the expert opinion of Dr. Makhijani in his LADTAP II Model Declaration (Makhijani Declaration).<sup>146</sup> Petitioners assert that the data in ER Table 5.4-8 is unreliable as it is based on the LADTAP II program,<sup>147</sup> which Petitioners claim to be outdated. The Makhijani Declaration claims that the "applicant's calculations of radiation doses to the general public as a result of consuming radioactively contaminated fish and invertebrates are incorrect."<sup>148</sup> They point to a newer version of the code, "LADTAP XL," they claim to be an improvement on LADTAP II that yields more appropriate dose estimates. Petitioners claim that, because the Applicant used LADTAP II to calculate doses in the ER, such dose calculations are "unreliable" and should be replaced by calculations performed using LADTAP XL.<sup>149</sup> Further, Petitioners claim, both versions of the LADTAP code use dose conversion factors that inappropriately consider only adults.<sup>150</sup> Specifically, Petitioners claim "the dose conversion factors used even in the more recent model [of LADTAP] are for adults. The factors for children are considerably higher and, in many circumstances, doses to children from the same environmental contamination are higher than those for adults even when differences in consumption are taken into account."<sup>151</sup>

<sup>&</sup>lt;sup>145</sup> Petition at 41.

<sup>&</sup>lt;sup>146</sup> Id. at 42 (citing Makhijani Declaration).

<sup>&</sup>lt;sup>147</sup> Petition at 42. LADTAP II is a computer code endorsed by the NRC for calculating radiation exposure to humans from routine releases of nuclear reactor liquid effluents. <u>See</u> User's Manual for LADTAP II - A Computer Program for Calculating Radiation Exposure to Man from Routine Releases of Nuclear Reactor Liquid Effluents, NUREG/CR-1276 (Mar. 17, 1980).
<sup>148</sup> <u>See</u> Makhijani Declaration.

<sup>&</sup>lt;sup>149</sup>  $\overline{\text{Petition}}$  at 42 (citing ER Table 5.4-8).

<sup>&</sup>lt;sup>150</sup> <u>Id.</u> at 42.

<sup>&</sup>lt;sup>151</sup> <u>Id.</u>

Applicant opposes admission of this contention, stating that "[t]he contention lacks adequate support and fails to establish a genuine *material* dispute."<sup>152</sup> Applicant argues that "Petitioners' criticism of LADTAP II rests solely on the *unexplained* results of an *unidentified* study comparing use of LADTAP II with LADTAP XL."<sup>153</sup> Applicant correctly hypothesizes<sup>154</sup> that the unidentified study is a 1991 evaluation of environmental conditions at the Savannah River Site (1991 SRS Study) that compared the results produced by these two versions of LADTAP. Applicant further asserts that "the LADTAP XL spreadsheet [in the 1991 report] is specific to the SRS, and Petitioners provide no support indicating that this spreadsheet is applicable to the STP site."<sup>155</sup>

The NRC Staff opposes this contention because, in the NRC Staff's view, "it lacks adequate support and fails to demonstrate a genuine dispute with the Applicant on a material issue of law or fact."<sup>156</sup> Specifically, the NRC Staff maintains the sole basis for this contention is Dr. Makhijani's claim that LADTAP II does not correctly calculate dose from ingestion of fish and invertebrates.<sup>157</sup> Yet, in light of the fact that Dr. Makhijani did not identify the source of his information, the NRC Staff claims that Petitioners have failed to provide the necessary support for this contention, rendering the contention inadmissible under NRC's pleading rules.<sup>158</sup>

The NRC Staff also refers to the ER to dispute Petitioners' claim that Applicant's use of LADTAP fails to address the dose of radiation that children would receive. Specifically, the

<sup>156</sup> Staff Answer at 62.

<sup>157</sup> <u>Id.</u>

<sup>&</sup>lt;sup>152</sup> STP Answer at 76.

<sup>&</sup>lt;sup>153</sup> <u>Id.</u> at 77.

<sup>&</sup>lt;sup>154</sup> During oral argument, Petitioners identified the study used by Dr. Makhijani to support this contention. <u>See</u> Tr. at 281. The report is D. M. Hamby, LADTAP XL: An Improved Electronic Spreadsheet Version of LADTAP II, Westinghouse Savannah River Company, WSRC-RP-91-975 (Nov. 18, 1991) (available at http://www.osti.gov/energycitations/servlets/purl/6704105-cS9Awv/6704105.pdf (last visited August 26, 2009)) [hereinafter 1991 SRS Study]. <sup>155</sup> STP Answer at 77-78.

<sup>&</sup>lt;sup>158</sup> <u>Id.</u> at 64.

NRC Staff claims that Applicant's discussion of the "maximally exposed individual" (MEI)<sup>159</sup> in

the ER is dispositive of this claim.

The MEI, for all organ doses except bone, determined by LADTAP to be a teenager because teenagers tend to use the shoreline more than other age groups, eats fish from and is exposed to the shoreline at Little Robbins Slough. The MEI for organ doses to bone is a child at the same location because of the greater sensitivity (calculationally, larger dose conversion factors) of that organ for that age group to internal exposure from ingestion of fish.<sup>160</sup>

The NRC Staff claims not only that this demonstrates that the Applicant accounted for children

in its dose calculation, but also that Petitioners fail to challenge this information as inadequate.

For these reasons, NRC Staff asserts that Petitioners have failed to demonstrate a material

dispute with respect to this part of this contention.<sup>161</sup>

The Board concludes this contention is inadmissible. First, Petitioners have failed to

challenge ER Section 5.4-3 which, as the NRC Staff points out,<sup>162</sup> contains dose estimates for

appropriate age groups. Second, the 1991 SRS Study upon which Dr. Makhijani relies does not

adequately support Petitioners' claims as we discuss below:<sup>163</sup>

Comparisons of LADTAP II and LADTAP XL output show that these enhancements result in an insignificant increase in predictions of total dose to the maximum individual and a 10% increase in total dose to the Savannah River user population.<sup>164</sup>

<sup>160</sup> Staff Answer at 64 (citing ER 5.4-3).

<sup>&</sup>lt;sup>159</sup> The LADTAP model is an implementation of the calculation procedures presented in Reg. Guide 1.109, Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 C.F.R. Part 50, Appendix I (Oct. 1977). As stated in this guide, NRC Staff have made use of the "maximum exposed individual" (MEI) approach to provide guidance for implementing Section II of Appendix I. In describing and identifying the MEI, four age groups are used with differing characteristics (food consumption, occupancy, internal dose conversion factors, etc.). <u>See</u> Reg. Guide 1.109-1.

<sup>&</sup>lt;sup>161</sup> Staff Answer at 64.

<sup>&</sup>lt;sup>162</sup> Id.

<sup>&</sup>lt;sup>163</sup> Without wading into the merits of this contention, we note that the 1991 SRS Report certainly cannot be considered as supportive of Petitioners' claims. To the contrary, this study attributes essentially all of the differences between the outputs of LADTAP II and LADTAP XL to different assumptions regarding fish consumption — LADTAP II assumes that the entire US population will consume the affected fish, while LADTAP XL assumes that only persons residing within fifty miles will consume the affected fish. If this study correctly explains this disparity, then the purportedly different outputs could not support Petitioners' claim of a computer code deficiency, but rather indicate that, at most, these differences are extremely modest.

Dr Makhijani's statement that there are large differences between LADTAP II and LADTAP XL calculations is central to this contention, and is flatly contradicted by the very study on which he bases his statement.<sup>165</sup> Because Dr Makhijani's statement does not otherwise contain sufficient support to demonstrate a genuine dispute on a material issue of fact or law, <sup>166</sup> we find Contention 17 to be inadmissible.

#### i. **Contention 18**

Petitioners state in Contention 18:

The STP Environmental Report concedes that in order to support the uranium fuel cycle for STP 3 and 4 at least twenty-one acres off-site will never be available for future use. The COLA adjudication should require that the Applicant explain the basis for the permanent dedication of these twenty-one acres to nuclear operations and specify the means by which the twenty-one acres will be secured and maintained in perpetuity.<sup>167</sup>

Petitioners allege there are numerous questions raised by Applicant's ER Table 10.1-2

and Section 10.1.2.1, which state that approximately 21 acres "will never be available for future

use."<sup>168</sup> Petitioners further allege that the Applicant's asserted failure to consider the long-term

impacts of the dedication of 21 acres, termed by Petitioners as a "nuclear wasteland," raise

unintended consequences that should be addressed in Applicant's ER.<sup>169</sup> Petitioners claim that

"the Applicant should specify the means by which these 21 acres would be secured and

maintained in perpetuity."<sup>170</sup>

Applicant opposes admission of this contention on the ground that it impermissibly

challenges Table S-3, lacks adequate support, and fails to demonstrate a genuine material

<sup>&</sup>lt;sup>165</sup> See <u>Yankee Atomic Elec. Co.</u> (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 90 (1996) (report before the Board is subject to scrutiny both as to those portions that support an intervenor's assertion and those that do not), rev'd in part on other grounds, CLI-96-7, 43 NRC 235 (1996). <sup>166</sup> <u>See</u> 10 C.F.R. § 2.309(f)(1)(v), (vi).

<sup>&</sup>lt;sup>167</sup> Petition at 43.

<sup>&</sup>lt;sup>168</sup> Id. (quoting STP ER Table 10.2-1, p. 10.1.13).

<sup>&</sup>lt;sup>169</sup> Petition at 43.

<sup>&</sup>lt;sup>170</sup> Id.; Tr. at 286-88.

issue of law or fact.<sup>171</sup> Specifically, Applicant claims that it derived the 21-acre approximation from mandated calculations in Table S-3 of 10 C.F.R. § 51.51 and that Petitioners' challenge of the 21-acre derivation is a direct challenge to an NRC rule.<sup>172</sup> Applicant points to ER Section 5.7.1 which addresses the environmental effects of a permanent<sup>173</sup> dedication of 21 acres of land and concludes that the impacts of such land use are small.<sup>174</sup> Applicant further rejects Petitioners' assertion that the Application fails to take into account long-term maintenance of the area that would be dedicated for disposal and points to sections of the ER that Petitioners fail to cite, much less dispute.<sup>175</sup>

The NRC Staff also opposes admission of contention 18 on the ground that it fails to comply with 10 C.F.R. § 2.309(f)(1)(iv) and (vi).<sup>176</sup> The NRC Staff maintains, as does the Applicant, that any calculations for land use were derived from Table S-3 and scaled according to the size of STP Units 3 and 4; as a consequence, any challenge to the use of such calculations is an impermissible challenge to Table S-3.<sup>177</sup> Moreover, the NRC Staff asserts that, while Petitioners state that further analysis is required, Petitioners fail to controvert Section 5.7 of the ER, which details the environmental impacts of the uranium fuel cycle—and that one such impact is land use.<sup>178</sup>

The Board concludes Contention 18 is inadmissible as it amounts to an impermissible attack on a Commission regulation. Specifically, the Commission has generically dealt with land use commitment and the environmental effects of the uranium fuel cycle by creating numerical values in Table S-3. In accordance with the directive in 10 C.F.R. § 51.51, the Applicant used the value on the Table for "Permanently committed" land and applied an appropriate scale factor

<sup>&</sup>lt;sup>171</sup> STP Answer at 81.

<sup>&</sup>lt;sup>172</sup> Id. at 81-82; Tr. at 290-92.

<sup>&</sup>lt;sup>173</sup> During oral argument, the Applicant suggested that this area is not necessarily permanently dedicated for all future time, but rather that the area can be later restored. Tr. at 291.

<sup>&</sup>lt;sup>174</sup> STP Answer at 82.

<sup>&</sup>lt;sup>175</sup> Id. at 82-83 (citing ER Section 5.5.3).

<sup>&</sup>lt;sup>176</sup> Staff Answer at 65.

<sup>&</sup>lt;sup>177</sup> <u>Id.</u> at 66, 67-68.

<sup>&</sup>lt;sup>178</sup> Id. at 65-66.

to the value to accommodate for the power of the reactors Applicant plans to employ at STP Units 3 and 4, which, in turn, determines the amount of land that would be required for disposal.<sup>179</sup> Having failed to obtain a waiver, Petitioners cannot attack this Commission regulation in this instance. To the extent that Petitioners raise additional "questions" regarding future land use commitment, Petitioners are seeking to require the Applicant to do more than the regulation requires.

Further, we conclude Petitioners' allegations with respect to the Applicant's failure to consider the future maintenance and security of the 21 acres do not create a genuine dispute with the Application. In this instance, Petitioners fail to cite or to dispute ER Section 5.7 which addresses future maintenance and security at STP Units 3 and 4. As this contention fails to provide any specific disputed facts relative to the STP COLA, we conclude this contention is inadmissible for failure to comply with 10 C.F.R. §§ 2.309(f)(1)(vi) and 2.335.

# j. Contention 19

Petitioners state in Contention 19:

The STP Environmental Report states that an unquantified amount of land onsite will be dedicated to licensed radioactive waste disposal facilities and be unavailable for other uses. But the Applicant has failed to specify the location onsite for the disposal facility and has not applied for the necessary permit for such activities pursuant to 10 C.F.R. Part 72.<sup>180</sup>

Petitioners allege that Table 10.1.2 of STP's ER "state[s] conclusively that some onsite

land will be used for radioactive waste disposal" and that, as a result, the Applicant is required

<sup>&</sup>lt;sup>179</sup> In spite of their recognition that they are prohibited from making such a collateral attack on Table S-3, Petitioners admitted at oral argument that is precisely what they were seeking to do:

Is it an attack of Table S-3? Yes, sir, it is. It's an assault on Table S-3, and future generations will wonder why we didn't assault it earlier and more vigorously, and to that extent we recognize that we'll probably not get much traction on this contention with this panel or anybody else in the chain of command at the NRC, and we may be derided for bringing this up, but I'm proud to sponsor this contention.

<sup>&</sup>lt;sup>180</sup> Petition at 44.

to obtain a Part 72 license.<sup>181</sup> Petitioners also object to Applicant's perceived failure to designate a specific land area for the location of its dry cask storage.<sup>182</sup>

Applicant opposes admission of this contention on the basis that it is an impermissible challenge to an NRC regulation and does not have sufficient support to demonstrate a material issue.<sup>183</sup> Applicant claims Petitioners have misinterpreted information in the ER and that there are no plans for a "permanent onsite radioactive waste disposal facility."<sup>184</sup> Applicant further claims that it derived the amount of land required for radioactive waste disposal from Table S-3 and, therefore, this contention represents an impermissible challenge to NRC rules — absent a waiver,<sup>185</sup> which Petitioners did not obtain. Applicant maintains that Petitioners have failed to provide any support to dispute the information contained in the ER and that it is not required to provide additional information relative to its dry cask storage.<sup>186</sup>

The NRC Staff similarly objects to this contention and claims that Petitioners have misunderstood Table 10.1-2 in the ER, that the Applicant merely describes "*potential* environmental impacts onsite and offsite from disposal of radioactive wastes" and that "any disposal area 'would be a *permitted waste disposal facility* with a land use designated for such activities."<sup>187</sup> The NRC Staff points out that the Applicant has adequately discussed the permits and licenses it may potentially need, including a Part 72 license "if necessary."<sup>188</sup> The NRC Staff claims that because Applicant has not yet applied for a Part 72 license, "issues regarding onsite disposal and dry cask storage are outside the scope of this proceeding."<sup>189</sup> NRC Staff

<sup>184</sup> <u>Id.</u>

<sup>186</sup> <u>Id.</u> at 84-85.

<sup>&</sup>lt;sup>181</sup> <u>Id.</u>

<sup>&</sup>lt;sup>182</sup> <u>Id.</u> (citing STP ER Figure 1.1-1, p.1.1-5/6).

<sup>&</sup>lt;sup>183</sup> STP Answer at 83.

<sup>&</sup>lt;sup>185</sup> <u>Id.</u> at 83-84.

<sup>&</sup>lt;sup>187</sup> Staff Answer at 70 (quoting ER Table 10.1-2).

<sup>&</sup>lt;sup>188</sup> Staff Answer at 70 (quoting ER Table 1.2-4).

<sup>&</sup>lt;sup>189</sup> Staff Answer at 70.

also claims that Petitioners have failed to provide any support for their assertion that Applicant is required to apply for a Part 72 license at this point.<sup>190</sup>

We conclude that Contention 19 is inadmissible. It is a direct challenge to 10 C.F.R. § 51.51, Table S-3, where both temporary and permanently committed land resources are specified as part of the uranium fuel cycle. ER Section 5.7.1 and Table 10.1.2 confirm that the temporary land use will be released for unrestricted use following decommissioning. The land use specified in Table S-3 is not directly associated with possible dry cask storage, and so discussion of a Part 72 license is not relevant to this contention. The Petitioners do not provide a basis for requiring greater specificity of dedicated land use associated with Table S-3 beyond that provided in the ER. Accordingly, Contention 19 is not admitted in accordance with 10 C.F.R. § 2.335.

#### k. Contention 20

Petitioners state in Contention 20:

The uranium fuel cycle has substantial greenhouse gas impacts [sic] must be considered in each phase of the uranium fuel cycle.<sup>191</sup>

Petitioners contend that the Applicant has failed to determine the "full impact of STP Units 3 and 4" because it did not analyze the "inevitable greenhouse gas emissions associated with each phase of the fuel cycle."<sup>192</sup> Petitioners claim <u>Massachusetts v. EPA</u>,<sup>193</sup> designating carbon dioxide as a pollutant, provides legal support for its position that the inevitable and predictable carbon emissions associated with nuclear power plant construction and operation should be addressed in the COLA.<sup>194</sup> In addition, Petitioners challenge Applicant's failure to include a carbon emissions analysis comparing "the greenhouse gas effects expected from each of the

<sup>&</sup>lt;sup>190</sup> <u>See id.</u> at 71.

<sup>&</sup>lt;sup>191</sup> Petition at 44.

<sup>&</sup>lt;sup>192</sup> <u>Id.</u> at 45; Tr. at 300-01.

<sup>&</sup>lt;sup>193</sup> 549 U.S. 497 (2007).

<sup>&</sup>lt;sup>194</sup> Petition at 45.

alternative technologies and their relative costs" with those expected from the uranium fuel cycle.<sup>195</sup>

Applicant claims that underlying Petitioners' challenge to "the adequacy of the consideration of the impacts of greenhouse gases from the uranium fuel cycle" is an attack on Table S-3 of 10 C.F.R. § 51.51, which, in turn, represents an impermissible challenge to NRC rules that is beyond the permissible scope of this proceeding.<sup>196</sup> In support of its position, Applicant claims that background documents used to generate Table S-3, as well as Note 1 of Table S-3, establish that CO2 emission from the uranium fuel cycle have already been considered — and that the Commission deems them to be zero.<sup>197</sup> In addition, Applicant contends Petitioners have failed to demonstrate that "the consideration of greenhouse gas emissions from the uranium fuel cycle is a material issue in this proceeding" and rejects Petitioners' claim that the ER must consider and compare carbon emissions in the alternatives analysis.<sup>198</sup> The Applicant argues that similar contentions have been rejected by other licensing boards.<sup>199</sup> Finally, the Applicant contends that, to the extent Petitioners' contention is one of omission, the ER does in fact address greenhouse gases and CO2 emissions.<sup>200</sup>

Consistent with the Applicant's argument, the NRC Staff asserts this contention is inadmissible because Petitioners fail to address the Applicant's discussion of CO2 emissions in the ER.<sup>201</sup> The NRC Staff also notes that while other licensing boards have rejected similar contentions, those boards have referred their rulings to the Commission for consideration.<sup>202</sup>

The Board concludes Contention 20 is inadmissible because Petitioners have failed to demonstrate a genuine dispute with the Application. Although structured as a contention of

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<sup>&</sup>lt;sup>195</sup> <u>Id.</u>

<sup>&</sup>lt;sup>196</sup> STP Answer at 85-86; Tr. at 301.

<sup>&</sup>lt;sup>197</sup> STP Answer at 85-86.

<sup>&</sup>lt;sup>198</sup> <u>Id.</u> at 86-87.

<sup>&</sup>lt;sup>199</sup> <u>Id.</u> at 89.

<sup>&</sup>lt;sup>200</sup> Id. at 88-89.

<sup>&</sup>lt;sup>201</sup> Staff Answer at 73-75.

<sup>&</sup>lt;sup>202</sup> <u>Id.</u> at 73 n.29.

omission — that the COLA lacks an analysis of greenhouse gas emissions from the uranium fuel cycle — it is clear that numerous ER sections address greenhouse gases and CO2 emissions in various stages of the uranium fuel cycle.<sup>203</sup> We also find that, as Petitioners have failed to challenge such discussion in the ER, Petitioners have raised no genuine dispute with this contention. For both reasons, this contention is inadmissible.

However, we note that central to all of the Applicant's arguments about the uranium fuel cycle is Table S-3, which omits CO2 in its listing of "gas effluents." As a consequence of this omission, those who use Table S-3 are directed by Footnote 1 to list their CO2 emission as "zero." There is a legitimate issue whether Table S-3, and the underlying assumptions used to create Table S-3, is correct in the specification of zero CO2 emissions. In fact, during oral argument, it became clear that Table S-3 was derived from background documents<sup>204</sup> that measured CO2 before global warming was recognized as a critical issue.<sup>205</sup> Counsel for the NRC Staff explained: "[t]o the extent that . . . you would suggest that Table S-3 be updated, I believe a rulemaking may be in the queue, but I don't know what level priority that's getting and whether it's particularly attributable to the greenhouse gas emissions issue associated with Table S-3.<sup>206</sup> Unquestionably, 10 C.F.R. § 2.335(a) prevents us from admitting a contention that attacks this regulation. At the same time, however, on the one hand, the NRC Staff argues that this

<sup>&</sup>lt;sup>203</sup> STP Answer at 88-89 (citing ER Sections 5.7.4, 5.7.8, and 10.4.1.3).

<sup>&</sup>lt;sup>204</sup> Data supporting Table S-3 are provided in Footnote 1 of Table S-3 and include the "Environmental Survey of the Uranium Fuel Cycle," WASH–1248 (Apr. 1974); "Environmental Survey of the Reprocessing and Waste Management Portion of the LWR Fuel Cycle," NUREG– 0116 (Supp.1 to WASH–1248) (Oct. 1976); "Public Comments and Task Force Responses Regarding the Environmental Survey of the Reprocessing and Waste Management Portions of the LWR Fuel Cycle," NUREG–0216 (Supp. 2 to WASH–1248) (Mar. 1977); and in the record of the final rulemaking pertaining to Uranium Fuel Cycle Impacts from Spent Fuel Reprocessing and Radioactive Waste Management, Docket RM–50–3.

<sup>&</sup>lt;sup>205</sup> Tr. at 302.

<sup>&</sup>lt;sup>206</sup> Tr. at 310.

<sup>&</sup>lt;sup>207</sup> Tr. at 306.

Board must accept its conclusions as definitively accurate. Accordingly, we encourage the Commission to give expeditious consideration to updating this table.<sup>208</sup>

### I. Contention 21

Petitioners state in Contention 21:

Impacts from severe radiological accident scenarios on the operation of other units at the STP site have not been considered in the Environmental Report.<sup>209</sup>

Petitioners contend that co-location of STP Units 3 and 4 with STP Units 1 and 2 has potentially significant implications in the event a major accident were to occur at any one of the four operating units. Petitioners claim "[t]he STP Environmental Report at Chapter 7 deals with severe accidents but has no discussion or analysis of the impact of a severe radiological accident at any one of the four units as it would impact the other remaining three units,"<sup>210</sup> or how "operations at undamaged units would be continued in the event that the entire site becomes seriously contaminated."<sup>211</sup> In Petitioners' estimation, the absence of this evaluation in the ER implies that a serious accident or release of radiological material at one plant would not have an impact at another plant.<sup>212</sup> Finally, Petitioners note "there is no discussion of how the other units would be protected in the event of a major fire or explosion at one of the other units."<sup>213</sup>

The Applicant argues that this contention should be rejected because "it is based upon an unsupported premise and does not raise an issue that is material to the adequacy of the ER."<sup>214</sup> Applicant asserts the plant design satisfies General Design Criterion (GDC) 4, which requires

- <sup>210</sup> <u>Id.</u>
- <sup>211</sup> Id.

<sup>213</sup> Petition at 46.

<sup>&</sup>lt;sup>208</sup> Other licensing boards have referred contentions involving Table S-3 to the Commission, <u>see</u> <u>Tennessee Valley Auth.</u> (Bellefonte Nuclear Power Plant, Units 3 & 4), LBP-08-16, 68 NRC \_\_\_, \_\_\_-(slip op. at 64-66) (Sept. 12, 2008) and <u>Duke Energy Carolinas, LLC</u> (William States Lee III Nuclear Station, Units 1 & 2), LBP-08-17, 68 NRC \_\_, \_\_- (slip op. at 13-14) (Sept. 22, 2008).

<sup>&</sup>lt;sup>209</sup> Petition at 46.

<sup>&</sup>lt;sup>212</sup> Id.; Tr. at 335.

<sup>&</sup>lt;sup>214</sup> STP Answer at 89.

that "structures, systems, and components important to safety be appropriately protected 'from events and conditions outside the nuclear power unit."<sup>215</sup> Moreover, Applicant maintains,

General Design Criterion ("GDC") 4 requires that structures, systems, and components important to safety be appropriately protected "from events and conditions outside the nuclear power unit." As provided in the ABWR DCD Tier 2, Section 3.1.2.1.4, the ABWR satisfies GDC 4. FSAR Section 3.1 incorporates this section in the DCD without any departures. Given the requirements in GDC 4 and the provisions in the DCD and FSAR showing compliance with GDC 4, Contention 21 does not raise an issue that is material to the adequacy of the evaluation of environmental impacts of accidents provided in ER Chapter 7.<sup>216</sup>

Applicant also rejects Petitioners' assertion that the COLA fails to explain how the units would be protected from an incident at a neighboring unit. The Applicant states that the Final Safety Analysis Report (FSAR) evaluates the impacts of flammable clouds, onsite fires and chemical hazards at STP Units 1 and 2 on STP Units 3 and 4<sup>217</sup> and also discusses the impact of any radiological accident at STP Units 1 and 2 on STP Units 3 and 4.<sup>218</sup> Applicant asserts that Petitioners failed to challenge these sections of the COLA that discuss such impacts and therefore the contention must be rejected.<sup>219</sup> The Applicant asserts that the distance of 1500 feet<sup>220</sup> between STP Units 1 and 2 and STP Units 3 and 4 is sufficient to ensure that fires or explosions at STP Units 1 or 2 would not pose a threat to STP Units 3 and 4.<sup>221</sup>

The NRC Staff opposes admission of the contention on the ground that "[t]he Petitioners state their contention as one of omission in the ER" without demonstrating why "the information must be contained in the ER."<sup>222</sup> In common with the Applicant, the NRC Staff points out that

<sup>221</sup> <u>See</u> Tr. at 338-41.

<sup>&</sup>lt;sup>215</sup> Id. at 90 (quoting 10 C.F.R. Part 50, App. A).

<sup>&</sup>lt;sup>216</sup> STP Answer at 90 (footnotes omitted).

<sup>&</sup>lt;sup>217</sup> Id. at 91.

<sup>&</sup>lt;sup>218</sup> <u>Id.</u>

<sup>&</sup>lt;sup>219</sup> Id. at 91-92.

<sup>&</sup>lt;sup>220</sup> The Applicant asserts a distance of 1500 feet would be sufficient based on its alleged use of NRC guidance documents that address chemical, fire, radioactive, and explosive releases. <u>See</u> Tr. at 341-43.

<sup>&</sup>lt;sup>222</sup> Staff Answer at 76.

the Petitioners have failed to dispute either the Applicant's data or the Applicant's discussion of the impacts of one incident at STP Units 1 and 2 on STP Units 3 and 4.<sup>223</sup>

The NRC Staff states that, when read in its broadest sense, this contention could be construed as a claim of omission that the ER must include the possibility of an accident at STP Units 3 or 4 that would cause radiological impacts on operations of STP Units 1 and 2.<sup>224</sup> After characterizing the claim in this manner, the NRC Staff concludes that "[t]he safe operation of [STP] Units 1 and 2 is governed by their current operating licenses and NRC regulations and is not within the scope of this proceeding . . . . [A]mendments to the existing [STP] Units 1 and 2 licenses and updates to their FSAR are governed by 10 C.F.R. Part 50."<sup>225</sup>

We conclude this contention is admissible. In the context of this NEPA-related contention, we find that Petitioners' assertion that the Applicant must address the potential impacts of a radiological incident on the operations of the other units establishes an admissible contention of omission. Petitioners have provided a specific statement of the issue and have provided a brief explanation of the basis. Given that a completed ER is a prerequisite to issuance of a COL, this issue is necessarily material and within the scope of these proceedings. The alleged fact supporting the contention is that the subject discussion is missing from the Application. For this contention to be admissible, it remains only to be shown that the allegedly missing material is required to be within the ER.

The contention states specifically that the ER omits discussion of the effects of accidents at STP Units 1 or 2 on STP Units 3 or 4 and vice versa. Neither the NRC Staff nor the Applicant points to specific portions of the ER addressing this issue. NUREG-1555 provides guidance for the NRC Staff in the evaluation of severe accidents that is to be included in the ER.<sup>226</sup> Specifically, NUREG-1555 states "[t]he events arising from causes external to the plant that are

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<sup>&</sup>lt;sup>223</sup> Id.

<sup>&</sup>lt;sup>224</sup> <u>Id.</u> at 76-77.

<sup>&</sup>lt;sup>225</sup> Id. at 77.

<sup>&</sup>lt;sup>226</sup> Guidance for the content of the ER is provided by Standard Review Plans for Environmental Reviews for Nuclear Power Plants, NUREG-1555 (Oct. 1999) [hereinafter NUREG-1555].

considered possible contributors to the risk associated with the plant should be discussed.<sup>227</sup> Petitioners argue that a severe accident at STP Units 1 or 2 could significantly affect safety at STP Units 3 or 4. STP Units 3 and 4 will be about 1500 feet away. Because the ER currently does not address how severe accidents at STP Units 1 or 2 might or might not affect STP Units 3 and 4, the Petitioners' argument appears reasonable.<sup>228</sup>

Concerning Design Basis Accidents, NUREG-1555 states, "Applicants for construction permits, operating licenses, combined licenses and early site permits are required to evaluate the design and performance of structures, systems, and components of the facility with the objective of assessing the risk to public health and safety resulting from the operation of the facility."<sup>229</sup> Although NUREG-1555 is only a guidance document, this Board considers this guidance to provide sufficient indication that the subject discussions may be required in the ER.

Accordingly, Petitioners have stated an admissible contention and the Board admits this contention.

## m. Contention 22

Petitioners state in Contention 22:

The COLA should consider all radiological, environmental and public health impacts related to decommissioning of STP Units 3 and 4.<sup>230</sup>

In this contention, Petitioners challenge Applicant's failure to include a definite plan for

decommissioning and contend that each of the three proposed decommissioning methods

<sup>&</sup>lt;sup>227</sup> NUREG-1555 at 7.2-3.

<sup>&</sup>lt;sup>228</sup> No NRC rule addresses the distance from the plant at which the effects of a severe accident must be assessed. However, guidance provided in NUREG-1555 makes numerous references to a 50-mile radius for severe accident and severe accident mitigation alternatives (SAMA) analyses. As guidance, this strongly suggests that the 1500 feet between proposed and pre-existing units is not so great, by itself, as to preclude the effects of a severe accident affecting safety at other units.

<sup>&</sup>lt;sup>229</sup> NUREG-1555 at 7.1-3.

<sup>&</sup>lt;sup>230</sup> Petition at 47.

presented in the ER are in error.<sup>231</sup> Those three methods are set forth in Section 5.9.2 of the ER.

Petitioners first challenge the Applicant's assumption, central to its discussion of all three proposed methods, that once the Applicant concluded its operation of STP Units 3 and 4, there will be no high-level waste onsite. Instead, Petitioners claim "there is no indication that spent fuel and high-level radioactive waste will ever leave the plant site."<sup>232</sup> Second, Petitioners challenge the Applicant's plan to remove plant parts and components from the site, asserting that "no such [off-site] facility currently exists nor is projected to exist in the future" to receive such parts and components.<sup>233</sup> Third, with respect to the Applicant's proposed decommissioning plans in the ER, Petitioners contend there is no provision for plant maintenance or management associated with the proposal to decommission the plant by maintaining it "in-situ."<sup>234</sup> Fourth, Petitioners assert the Applicant's decommissioning plan fails to address waste-stream and environmental justice issues that would arise from the "disposition of highly irradiated materials off-site."<sup>235</sup> Finally, Petitioners are concerned that the Applicant has made a speculative leap of faith that future decommissioning technologies will become available by the time STP Units 3 and 4 are to be decommissioned.<sup>236</sup>

The Applicant presents several arguments opposing the admission of this contention. First, the Applicant maintains that "an applicant for a COL need not describe its decommissioning plans" in its COLA, but rather, as dictated by 10 C.F.R. §§ 50.82(a)(4) and 52.110(d), decommissioning plans are not required until the Applicant files a "post-shutdown

<sup>235</sup> Id.

<sup>&</sup>lt;sup>231</sup> Id.

<sup>&</sup>lt;sup>232</sup> <u>Id.</u> During oral argument, Petitioners asserted that part of its concern in this regard involved the Applicant's purported failure to address environmental justice. See Tr. at 343. However, both the Applicant and the NRC Staff claimed that these matters are to be addressed at a much later point in time, when the Applicant submits an application for decommissioning. See Tr. at 344, 346. <sup>233</sup> Petition at 47.

<sup>&</sup>lt;sup>234</sup> I<u>d.</u>

<sup>&</sup>lt;sup>236</sup> <u>Id.</u> at 48.

decommissioning activities report," which is not due until two years before "permanent cessation of operation."<sup>237</sup> Separate and apart from these legal arguments, the Applicant claims its ER lays out its decommissioning plan, which it claims incorporates the NRC's Generic Environmental Impact Statement (GEIS).<sup>238</sup> Applicant further asserts that Petitioners have failed to controvert either the Applicant's legal assertion that detailed decommissioning analysis is premature at this time, or the Applicant's factual analysis in the ER that applied the subject GEIS.239

The NRC Staff also objects to the admission of this contention, claiming that it fails to meet the requirements of 10 C.F.R. § 2.309(f)(1)(iii), (iv), (v), and (vi).<sup>240</sup> The NRC Staff, like the Applicant, argues that Petitioners fail to provide any legal support for their claim the Applicant must provide additional analysis with respect to its decommissioning plans,<sup>241</sup> and affirmatively argues that "a combined license applicant is not required to identify a specific method of decommissioning a plant at the time of the Application."<sup>242</sup> The NRC Staff also argues that the detailed requirements set forth in 10 C.F.R. § 52.110 make clear that decommissioning is not a matter to be dealt with in detail at this stage of the process, but instead is to be addressed extensively near the end of reactor operations.<sup>243</sup> The NRC Staff concludes its argument by criticizing Petitioners for failing to recognize what Staff views as the NRC's longstanding success and history in decommissioning nuclear power plants.<sup>244</sup>

We conclude that Contention 22 is inadmissible for failure to present sufficient information to demonstrate that a genuine dispute exists with the Applicant.<sup>245</sup> This contention

<sup>242</sup> Id.

<sup>&</sup>lt;sup>237</sup> STP Answer at 93.

<sup>&</sup>lt;sup>238</sup> Final Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities, NUREG-0586 (Aug. 1988).

<sup>&</sup>lt;sup>239</sup> Id. at 95-96.

<sup>&</sup>lt;sup>240</sup> Staff Answer at 78.

<sup>&</sup>lt;sup>241</sup> <u>Id.</u> at 78.

<sup>&</sup>lt;sup>243</sup> Id. at 78-79.

<sup>&</sup>lt;sup>244</sup> <u>Id.</u> at 79-80. <sup>245</sup> <u>See</u> 10 C.F.R. § 2.309(f)(1)(vi).

is framed as a contention of omission in that Petitioners are alleging the Applicant has neglected to provide information relating to the decommissioning plan in the COLA. Petitioners have failed to provide any legal support for their proposition that such information is required in the COLA. In fact, as both Applicant and Staff point out, 10 C.F.R. §§ 50.82(a)(4) and 52.110(d) require decommissioning plans to be provided in a "post-shutdown decommissioning activities report" due within two years of "permanent cessation of operation" and not within the COLA. We likewise reject Petitioners assertion that Applicant has erroneously claimed high-level waste will remain onsite; this is an impermissible challenge to the Waste Confidence Rule.<sup>246</sup> Accordingly, we conclude that Contention 22 is not admissible.

#### n. Contention 23

Petitioners state in Contention 23:

The STP Environmental Report is inadequate because it fails to make reasonable assumptions about alternatives to the proposed action of constructing and operating STP Units 3 and 4.<sup>247</sup>

Contention 23 catalogues a number of alleged inadequacies in the STP ER concerning the evaluation of alternatives to building STP Units 3 and 4. Specifically, Petitioners claim that the Applicant's comparative evaluation of power generation erroneously excludes a number of renewable alternative energy sources because such sources are intermittent and too unreliable for a baseload power plant.<sup>248</sup> Petitioners also assert that newly developed storage technologies (compressed air storage and ice energy storage) combined with these renewable alternatives (solar and wind) could provide reliable power, but that the Applicant failed to consider such combinations.<sup>249</sup> In particular, Petitioners claim that there are viable geothermal resources within the state of Texas and that production of electricity from biomass is a proven

<sup>&</sup>lt;sup>246</sup> <u>See</u> 10 C.F.R. § 2.335.

<sup>&</sup>lt;sup>247</sup> Petition at 48.

<sup>&</sup>lt;sup>248</sup> Id. at 48-49; Tr. at 359.

<sup>&</sup>lt;sup>249</sup> Petition at 49.

technology, but that the Applicant's evaluation of geothermal and biomass power in the ER is inadequate.<sup>250</sup>

Petitioners contend the Applicant should have considered conservation/energy efficiency (demand side management (DSM)) as a legitimate alternative rather than dismissing it on the ground that DSM itself cannot produce baseload power.<sup>251</sup> Further, Petitioners object to the lack of a "quantified cost comparison of nuclear with energy alternatives,"<sup>252</sup> and contend that without such a comparison, the Applicant's evaluation of alternatives in the ER is inadequate. Finally, Petitioners maintain "there should be a side-by-side comparison of mortality and morbidity consequences of nuclear power compared to renewable fuels" and "a side-by-side comparison of nuclear fuels and renewable fuels related to the effects of catastrophic accidents."253

Applicant opposes admission of this contention on several grounds. First, the Applicant claims that Commission case law requires that it evaluate only alternatives that support the purpose of the project.<sup>254</sup> Because the Applicant has characterized the "purpose of the proposed action [as] the construction and operation of a 2,700-MWe nuclear power plant that is to be used as an independent merchant baseload facility,"<sup>255</sup> it maintains that it need not evaluate any alternatives, such as DSM, that "cannot produce baseload power."<sup>256</sup>

In addition, the Applicant maintains that Petitioners fail to provide any factual or legal support for the proposition that the alternatives analysis must also consider combinations of production and storage systems.<sup>257</sup> Applicant claims that not only did its ER address the environmental impacts of several alternative energy sources including wind, solar, geothermal,

- <sup>252</sup> Id. at 53.
- <sup>253</sup> Id. at 50; Tr. at 377, 382.
- <sup>254</sup> STP Answer at 99-100 (citing Exelon Generation Co. (Early Site Permit for Clinton ESP Site), CLI-05-29, 62 NRC 801, 808 (2005)); Tr. at 360-65. <sup>255</sup> STP Answer at 99.
- <sup>256</sup> l<u>d.</u>

<sup>&</sup>lt;sup>250</sup> I<u>d.</u> at 50-51.

<sup>&</sup>lt;sup>251</sup> <u>Id.</u> at 49.

<sup>&</sup>lt;sup>257</sup> Id. at 102.

biomass, and combinations of sources, but that it concluded these alternative energy sources had "environmental impacts, and some of the alternatives (such as wind and solar power) have large impacts on land."<sup>258</sup> Further, Applicant controverts Petitioners' claims that the ER fails to include the estimated costs of STP Units 3 and 4.<sup>259</sup> Applicant also argues that its analysis of these alternatives need not include either a more detailed cost comparison of alternatives, or any side-by-side comparison of mortality, morbidity or effects of catastrophic accidents.<sup>260</sup>

The NRC Staff opposes admission of this contention on the ground that it does not meet four of the six contention admissibility standards of 10 C.F.R. § 2.309(f)(1).<sup>261</sup> The NRC Staff also argues the Applicant is not required to evaluate DSM as an alternative because the Commission held in one case that "[DSM] is not an alternative to the proposal to build new baseload power generation.<sup>\*262</sup> The NRC Staff claims that, unless Petitioners can demonstrate that its proposed alternatives "meet the identified purpose of the proposed action,<sup>\*263</sup> the Applicant is not obligated to evaluate such alternatives. Additionally, the NRC Staff rejects Petitioners' assertion that the Applicant is required to perform a cost comparison of alternatives because, in the NRC Staff's view, a cost comparison of alternatives is required only where an alternative is both environmentally less detrimental and meets the objective of the project.<sup>264</sup>

Because this contention is a combination of alleged deficiencies and omissions with respect to the Applicant's evaluation of alternatives, we address the major points separately.

We turn first to Petitioners' claim that Applicant erred both in failing to address baseload power in such a way that would incorporate DSM and in failing to address an alternative composed solely of renewable energy sources. Applicant notes that ER Section 9.2.2.6.1

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<sup>&</sup>lt;sup>258</sup> <u>Id.</u> at 105.

<sup>&</sup>lt;sup>259</sup> <u>Id.</u> at 109.

<sup>&</sup>lt;sup>260</sup> <u>Id.</u> at 109-112; Tr. 377-78.

<sup>&</sup>lt;sup>261</sup> Staff Answer at 81 (contention fails to meet 10 C.F.R. § 2.309(f)(1)(iii), (iv), (v), and (vi)).

<sup>&</sup>lt;sup>262</sup> Id. at 81-82 (citing <u>Clinton</u>, CLI-05-29, 62 NRC at 807).

<sup>&</sup>lt;sup>263</sup> Staff Answer at 85.

<sup>&</sup>lt;sup>264</sup> <u>Id.</u> at 86-87. The NRC Staff also asserts that while a comparison of mortality and morbidity would not be inherently inadmissible, Petitioners would first need to demonstrate there is a reasonable alternative — which they have not shown. <u>See</u> Tr. at 381-82.

discusses what the combinations involve, and explicitly mentions mixes of wind power and other types of combined cycle units and other kinds of production facilities that in combination could produce base load power. So it's very clear that our [evaluated] combinations do include wind in combination with other mechanisms that are capable of producing base load power.<sup>265</sup>

Petitioners have not disputed this section of the ER by alleging facts or expert opinion that

controverts it. Accordingly, this part of the contention is inadmissible. Because of Petitioners'

failure to create a genuine issue in this regard, we need not resolve whether the Applicant's

"purpose is unreasonably narrow or whether a proposed alternative is so far beyond the realm

of reason that it must be rejected out of hand."266

With respect to Petitioners' claim that the Applicant failed to consider newly developed

storage technologies (compressed air storage and ice energy storage) in combination with

renewable energy sources as a viable alternative to proposed STP Units 3 and 4, we agree with

the Applicant that Petitioners simply overlooked the Applicant's alternatives evaluation in its

ER.<sup>267</sup> ER Section 9.2-19 states:

Wind and solar facilities could be used in combination with storage systems to produce baseload power. By storing the power produced from wind or solar facilities and releasing it when the wind and solar facilities are not generating power, energy storage in combination with the wind or solar facilities would be able to generate electricity continuously. However, large-scale energy storage in Texas is either not available or would not be economically viable. For example, the storage of even one day's output at 2700 MW is well beyond any demonstration projects using batteries, compressed air, hydrogen, or other storage mechanism and the cost of such systems, even if available, would be prohibitive. Adding the significant cost of storage systems to the cost of wind or solar facilities would render the total cost non-competitive.<sup>268</sup>

In this instance, Petitioners fail even to cite, much less dispute, ER Section 9.2-19, which

discusses such storage technologies and combination of alternatives. As this part of the

contention fails to allege any facts or expert opinion relative to the Application, we find it

inadmissible.

<sup>&</sup>lt;sup>265</sup> Tr. at 322.

<sup>&</sup>lt;sup>266</sup> Levy, LBP-09-10, 69 NRC at \_\_\_ (slip op. at 91).

<sup>&</sup>lt;sup>267</sup> <u>See</u> Tr. at 331.

<sup>&</sup>lt;sup>268</sup> ER Section 9.2-19.

With respect to Petitioners claim that "there should be a side-by-side comparison of mortality and morbidity consequences of nuclear power compared to renewable fuels" and there should be "a side-by-side comparison of nuclear fuels and renewable fuels related to the effects of catastrophic accidents,"<sup>269</sup> Petitioners have referred to no legal requirement for such an evaluation, thus failing to show that this issue "is material to the findings the NRC must make."<sup>270</sup> Accordingly, this part of the contention is not admissible.

With respect to Petitioners' claim that the Applicant has not sufficiently addressed the possibility of geothermal energy, "the EIS need not consider an infinite range of alternatives, only reasonable or feasible ones."<sup>271</sup> To demonstrate that this contention is within the scope of this proceeding requires some minimal showing that geothermal energy is reasonable and feasible in the electrical area that Units 3 and 4 are to serve. Applicant points out that, to date, only shallow geothermal resources have been developed.<sup>272</sup> The only geothermal resources in the vicinity of STP lie in deep formations and their development and use are currently speculative.<sup>273</sup> Petitioners have failed to provide any information suggesting the current feasibility of geothermal power within the electrical area that Units 3 and 4 are to serve and thus have not established this part of the contention to be within the scope of the proceedings. Accordingly, this part of the contention is inadmissible.

<sup>&</sup>lt;sup>269</sup> Petition at 50.

<sup>&</sup>lt;sup>270</sup> 10 C.F.R. § 2.309 (f)(1)(iv).

<sup>&</sup>lt;sup>271</sup> As explained in <u>Dominion Nuclear North Anna, LLC</u> (Early Site Permit for North Anna ESP LBP-07-9, 65 NRC 539, 607 (2007):

<sup>Federal courts now review the range of alternatives in an EIS under the "rule of reason." <u>Westlands Water Dist. v. U.S. Department of Interior</u>, 376 F.3d 853, 868 (9th Cir. 2004); <u>City of Bridgeton v. Federal Aviation Administration</u>, 212 F.3d 448, 458 (8th Cir. 2000). Under this rule, "the EIS need not consider an infinite range of alternatives, only reasonable or feasible ones." <u>Westlands Water Dist.</u>, 376 F.3d at 868.</sup> 

<sup>&</sup>lt;sup>273</sup> Tr. at 391.

With respect to Petitioners' claim that the Applicant has failed to provide a "quantified cost comparison of nuclear with energy alternatives,"<sup>274</sup> during oral argument, the Applicant pointed to specific sections of the ER containing cost information.<sup>275</sup> While this information is not provided in a comparison format, Petitioners have not provided any legal or factual requirement mandating that it be presented in such a format. In light of the fact that the allegedly missing information is present in the ER, this part of the contention is inadmissible.

Accordingly, this contention is not admitted.

#### o. Contention 24

Petitioners state in Contention 24:

The COLA is inadequate and unreliable because it fails to discuss the access to and costs of uranium used for power plant fuel.<sup>276</sup>

In this contention Petitioners state that "the COLA should consider whether the cost and supply assumptions that underpin the decision to use nuclear fuel are reasonable."<sup>277</sup> In support of this assertion, Petitioners argue that STP is likely to purchase a significant amount of uranium from foreign sources over the lives of STP Units 3 and 4, and that the cost of uranium and uranium processing has increased over the last 15 years, suggesting that "the long-term trend costs and supplies are much more problematic than suggested in the STP Environmental Report."<sup>278</sup>

Applicant opposes admission of this contention on the basis that Petitioners do "not challenge the conclusion that the uranium use by STP Units 3 and 4 will constitute a small percent of the overall world resources of uranium."<sup>279</sup> Applicant also notes that "issues related to the cost of uranium or the source of uranium are not material to an analysis of the

<sup>&</sup>lt;sup>274</sup> Petition at 53.

<sup>&</sup>lt;sup>275</sup> Tr. at 396.

<sup>&</sup>lt;sup>276</sup> Petition at 57.

<sup>&</sup>lt;sup>277</sup> <u>Id.</u> at 58; Tr. at 426-27.

<sup>&</sup>lt;sup>278</sup> Petition at 58 (citing Energy Information Administration, Uranium Marketing Annual Report, http://www.eia.doe.gov/cneaf/nuclear/umar/summarytable1.html (last accessed August 26, 2009)).

<sup>&</sup>lt;sup>279</sup> STP Answer at 113.

environmental impacts of a nuclear plant, and Petitioners have not provided any justification for requiring such an analysis pursuant to NEPA."<sup>280</sup>

Applicant notes that Petitioners do not actually dispute the availability of uranium.<sup>281</sup> Contention 24 does not mention or contest the uranium cost estimate of 0.435 cents per kW hour provided in the ER.<sup>282</sup> Consequently, Applicant asserts that Petitioners have failed to raise a genuine dispute.<sup>283</sup>

The NRC Staff also opposes admission of this contention, asserting that it "is unsupported by alleged facts or expert opinion, fails to raise a genuine dispute with the application, and does not raise an issue that is material to this proceeding."<sup>284</sup> The NRC Staff claims the primary assertion by Petitioners is that "the Applicant should consider whether the cost and supply assumption underlying the decision to use nuclear fuel are reasonable."<sup>285</sup> But the NRC Staff asserts that Petitioners have failed to provide any basis in fact or law for such an evaluation.<sup>286</sup> Furthermore, Petitioners do not provide "any information to indicate that foreign sources of uranium have a significant link to health and safety or the environment and, therefore, raise an issue not material to the outcome of this proceeding."<sup>287</sup>

We find that this contention is inadmissible because it does not create a genuine dispute with the Application.<sup>288</sup> Petitioners have failed to allege facts or expert opinions that controvert any of the information presented by in the Application, and as a consequence, have failed to raise a genuine dispute. Further, as a contention of omission, Petitioners have failed to cite any rule requiring, or provided a reasoned argument for, inclusion of the discussion of environmental impacts of using foreign fuel. Accordingly, this contention is inadmissible.

<sup>&</sup>lt;sup>280</sup> <u>Id.</u> at 113.

<sup>&</sup>lt;sup>281</sup> <u>Id.</u> at 113-114.

<sup>&</sup>lt;sup>282</sup> Id. at 114 (citing ER Table 10.4-2).

<sup>&</sup>lt;sup>283</sup> STP Answer at 114.

<sup>&</sup>lt;sup>284</sup> Staff Answer at 87.

<sup>&</sup>lt;sup>285</sup> <u>Id.</u> at 88.

<sup>&</sup>lt;sup>286</sup> <u>Id.</u>

<sup>&</sup>lt;sup>287</sup> Id. at 88-89.

<sup>&</sup>lt;sup>288</sup> See 10 C.F.R. § 2.309(f)(1)(iv) and (vi).

## p. Contention 25

Petitioners state in Contention 25:

The Decommissioning Funding Assurance described in the application is inadequate to assure sufficient funds will be available to fully decontaminate and decommission South Texas Project Units 3 and 4. The NRG Licensees must use the prepayment method of assuring decommissioning funding.<sup>289</sup>

In this contention, Petitioners challenge the Applicant's selection of an external sinking fund,

pursuant to 10 C.F.R. § 50.75, to ensure there will be sufficient monies available for

decommissioning STP Units 3 and 4.<sup>290</sup> Petitioners argue that selection of this financial method

contradicts the Applicant's statement in the COLA that the "NRG Licensees do not technically

qualify to use the sinking fund method."<sup>291</sup> Arguing that NRG does not qualify to use a sinking

fund, Petitioners claim, the Applicant must prepay all of the costs of decommissioning.<sup>292</sup>

Likewise, Petitioners assert that the Applicant cannot use a sinking fund established under

Texas law to satisfy its decommissioning obligations under federal law.<sup>293</sup>

Applicant rejects Petitioners' claim that it may not use the Texas sinking fund to enable it

to qualify for the NRC's external sinking fund method of decommissioning funding.<sup>294</sup> As it

explains:

The terms of 10 C.F.R. § 50.75(e)(1)(ii) embody the principle that NRC will defer to state economic regulators where decommissioning funding is assured by the fact that any shortfall in decommissioning funds will be provided by ratepayers pursuant to state law. The Texas statute provides precisely this type of assurance, which enables the NRG Licensees to use a variant of the external sinking fund method even though, under the Texas law, the plan and desire is that ratepayers would never be called upon to actually fund decommissioning.<sup>295</sup>

Accordingly, Applicant maintains that this Texas statutory provision merely enables the

Applicant to comply with the federal regulation, provided it otherwise meets the requirements of

- <sup>290</sup> <u>Id.</u>
- <sup>291</sup> <u>Id.</u>

 $^{293}$  Petition at 60.

<sup>&</sup>lt;sup>289</sup> Petition at 59.

<sup>&</sup>lt;sup>292</sup> <u>Id.;</u> Tr. at 437-38.

<sup>&</sup>lt;sup>294</sup> <u>See</u> STP Answer at 115-117.

<sup>&</sup>lt;sup>295</sup> Id. at 117-118 (internal footnote omitted).

the NRC's external sinking fund — which the Applicant claims it has done.<sup>296</sup> Finally, the Applicant disputes Petitioners' claim that it is obligated to pursue prepayment of its decommissioning costs, but instead claims it may choose from any of the methods advanced in 10 C.F.R. § 50.75(e)(1) to meet its decommissioning obligations.<sup>297</sup>

The NRC Staff contends that Petitioners' claim the Applicant is limited to pursing the prepayment method for decommissioning funding is an impermissible challenge to the Commission's regulations set forth in 10 C.F.R. Part 50, specifically 10 C.F.R. § 50.75.<sup>298</sup> To the contrary, the NRC Staff maintains that the Commission's regulations and NRC case law authorize applicants to choose among different mechanisms to provide decommissioning assurance.<sup>299</sup> The NRC Staff also maintains Petitioners' claim — that the Applicant cannot qualify for the Texas sinking fund — is outside the scope of this proceeding.<sup>300</sup>

The subject decommissioning rules are designed "(1) [to] minimize the administrative effort of licensees and the Commission and (2) to provid[e] reasonable assurance that funds will be available to carry out decommissioning in a manner which protects public health and safety."<sup>301</sup> In furtherance of this objective, the Commission revised its decommissioning rules in 2007 to address the unique status of COLs — as the prior rules were too stringent upon applicants for both a construction and operating license, where they had yet to even break ground on the subject reactor.<sup>302</sup> The Commission specifically revised Section 50.75(b)(4) as it applies to COLs under Part 52 because the requirements in place (decommissioning report and

<sup>&</sup>lt;sup>296</sup> STP Answer at 119; Tr. at 438-39.

<sup>&</sup>lt;sup>297</sup> <u>Id.</u> at 121-122.

<sup>&</sup>lt;sup>298</sup> Staff Answer at 90.

<sup>&</sup>lt;sup>299</sup> <u>Id.</u> at 90-92.

<sup>&</sup>lt;sup>300</sup> Id. at 93-94.

<sup>&</sup>lt;sup>301</sup> <u>Consolidated Edison Co. of N.Y.</u> (Indian Point, Units 1 & 2), CLI-01-19, 54 NRC 109, 142 (2001) (citing Final Rule: General Requirements for Decommissioning Nuclear Facilities, 53 Fed. Reg. 24,018, 24,030 (June 27, 1988) (internal quotations omitted)).

<sup>&</sup>lt;sup>302</sup> <u>See</u> Licenses, Certifications, and Approvals for Nuclear Power Plants, 72 Fed. Reg. 49,352, 49,406 (Aug. 28, 2007).

certification of financial assurance at the application phase) were too stringent.<sup>303</sup> Under the revised rule, the COL applicant must submit a decommissioning report containing a certification that the funding assurance will be provided no later than thirty days after the NRC publishes notice in the Federal Register of its scheduled date for initial fuel loading.<sup>304</sup> Petitioners claim the Applicant must undertake a specific prepayment method of funding decommissioning costs, but point us to no requirement that the Applicant do so. On the other hand, NRC guidance<sup>305</sup> and rules<sup>306</sup> suggests an applicant or licensee is not obligated to choose prepayment, sinking fund, or some other funding assurance method to cover for the total estimated decommissioning cost. Accordingly, Petitioners' claim that the Applicant must pursue the prepayment method conflicts with the NRC guidance and rules in this regard and so is outside the permissible scope of this proceeding under 10 C.F.R. § 2.335(a).

With respect to Petitioners' claim that there is some defect in the Texas scheme

designed to enable applicants to qualify for the external sinking fund mechanism, we see none.

Texas has determined that its taxpayers will serve as the functional guarantors of the

Applicant's decommissioning liabilities. While certainly unique among the fifty states in this

<sup>&</sup>lt;sup>303</sup> 72 Fed. Reg. at 49,406 states:

<sup>[</sup>R]equiring the combined license applicant to comply with the current requirement in § 50.75(b)(4) that the operating license applicant submit a copy of the financial instrument obtained to satisfy the requirements of § 50.75(e), would place a more stringent requirement on the combined license applicant, inasmuch as that applicant would be required to fund decommissioning assurance at an earlier date as compared with the operating license applicant.

 <sup>&</sup>lt;sup>304</sup> See 10 C.F.R. § 52.103(a); see also 10 C.F.R. § 50.75(b)(1); 72 Fed. Reg. at 49,406.
 <sup>305</sup> See Standard Review Plan on Power Reactor Licensee Financial Qualifications and Decommissioning Funding Assurance, NUREG-1577 at 6 (Rev. 1) (Feb. 1999).
 <sup>306</sup> 10 C.F.R. § 50.75(e)(1)(ii), which states in pertinent part:

<sup>(</sup>ii) External sinking fund. An external sinking fund is a fund established and maintained by setting funds aside periodically in an account segregated from licensee assets and outside the administrative control of the licensee and its subsidiaries or affiliates in which the total amount of funds would be sufficient to pay decommissioning costs at the time permanent termination of operations is expected. An external sinking fund may be in the form of a trust, escrow account, or Government fund, with payment by certificate of deposit, deposit of Government or other securities, or other method acceptable to the NRC.

approach,<sup>307</sup> Petitioners have not cited any legal authority that the guarantee afforded Applicant fails to comply with the NRC rules on decommissioning funding.

Accordingly, because 10 C.F.R. Part 50 has established clear rules governing decommissioning funding requirements and enables an applicant to choose its method of meeting these funding requirements, Petitioners' contention constitutes an impermissible challenge to the Commission's decommissioning regulations. Likewise, because the State of Texas has supplied a guarantee for applicants to meet these funding costs,<sup>308</sup> because Applicant has indicated it meets the Texas statutory requirements, and because Petitioners have failed to allege facts or expert opinions controverting Applicant's claims in this regard, Petitioners have failed to create a genuine dispute with the Application. Accordingly, this contention is inadmissible under 10 C.F.R § 2.335(a) as being outside of the permissible scope of this proceeding and inadmissible for failure to create a genuine dispute under 10 C.F.R. § 2.309(f)(1)(vi).<sup>309</sup>

#### q. Contention 26

Petitioners state in Contention 26:

The Applicant has not established that there is a need for the power that would be generated by STP Units 3 and 4.<sup>310</sup>

Petitioners claim that, in accordance with 10 C.F.R. Part 51 and NUREG 1555, because a San Antonio-based municipal utility, CPS Energy, is involved in the Application, the Applicant bears a greater burden to demonstrate a need for power in accordance with 10 C.F.R. Part 51 and NUREG 1555. Moreover, Petitioners argue that the Applicant has failed to meet this burden, and consequently, that the Applicant cannot justify the construction and operation of STP Units 3 and 4.<sup>311</sup> Petitioners' factual support for this contention is a report by its expert, Dr. Makhijani,

<sup>&</sup>lt;sup>307</sup> <u>See</u> Tr. at 441.

<sup>&</sup>lt;sup>308</sup> 10 C.F.R. § 2.309(f)(1)(iii).

<sup>&</sup>lt;sup>309</sup> <u>See id.</u>

<sup>&</sup>lt;sup>310</sup> Petition at 62.

<sup>&</sup>lt;sup>311</sup> Id.

that addresses "San Antonio's specific circumstances related to additional generating capacity and costs related thereto."<sup>312</sup>

Petitioners claim there are several ways in which the Applicant has failed to establish the need for power that would justify adding STP Units 3 and 4. First, Petitioners claim that CPS Energy itself has conceded it is experiencing a declining use of electricity.<sup>313</sup> Second, Petitioners assert this decline in demand obligates the Applicant to assess "the viability of new nuclear generation from the economic downturn and the increased funding for energy efficiency and renewable energy sources," but that the Applicant has not done so.<sup>314</sup> Third, Petitioners maintain that CPS Energy's decision to retire three of its natural gas-fired power plants confirms that there is inadequate demand in the area served, and so, for this reason as well, the Applicant cannot justify adding STP Units 3 and 4.<sup>315</sup>

Applicant asserts it has performed a need for power analysis, as required by NEPA,<sup>316</sup> in ER Chapter 8, and that the analysis has gone unchallenged by Petitioners.<sup>317</sup> Applicant further claims that Petitioners wrongly insist that the appropriate Region of Interest (ROI) is the CPS Energy service area rather than the Applicant's choice of ROI—which is the Electric Reliability Council of Texas (ERCOT) service area.<sup>318</sup> The Applicant explains that excess power in the CPS Energy service area is of no consequence because "any generating capacity that exceeds the demand in the CPS Energy service area would be sold in the ERCOT wholesale market." <sup>319</sup> Consequently, the Applicant concludes, "Petitioners' allegations regarding a purported lack of

<sup>313</sup> Petition at 62 (citing statements from the Deputy General Manager of CPS Energy).

- <sup>318</sup> <u>Id.</u> at 124.
- <sup>319</sup> Id.

<sup>&</sup>lt;sup>312</sup> <u>Id.</u> (citing Energy Efficiency Potential: San Antonio's Bright Future, Arjun Makhijani, Ph.D. (Oct. 2008)); Tr. at 452-53.

<sup>&</sup>lt;sup>314</sup> Petition at 63.

<sup>&</sup>lt;sup>315</sup> <u>Id.</u> at 63-64.

 $<sup>\</sup>frac{^{316}}{^{316}}$  STP Answer at 127.

<sup>&</sup>lt;sup>317</sup> <u>Id.</u> at 123.

need for power in the CPS Energy service area are simply immaterial to the need for power analysis for STP Units 3 and 4."<sup>320</sup>

The Applicant also urges the Board to reject Petitioners' assertion that its demand forecasts are insufficiently precise, claiming the NRC accepts that demand forecasting contains inherent uncertainties.<sup>321</sup> Similarly, Applicant maintains that its demand forecast is not flawed for failing to focus exclusively on an analysis of the current economic downturn because "[s]hort term fluctuations are not material to a long term need for power analysis.<sup>322</sup> With respect to Petitioners' assertion that CPS Energy conceded a declining electricity demand in its service area, the Applicant claims Petitioners have failed to show how such a concession is material to the outcome of this licensing proceeding.<sup>323</sup> Finally, with respect to the retirement of CPS Energy's three natural gas-fired plants, the Applicant claims the retirement of these plants instead supports, not refutes, its need for power analysis because the retirement of these plants will require more power — which STP Units 3 and 4 will provide.<sup>324</sup>

Like the Applicant, the NRC Staff asserts that Petitioners have failed to address, much less controvert, the Applicant's need for power analysis.<sup>325</sup> The NRC Staff maintains that the Commission has for some time viewed the need for power analysis as limited to reasonable demand forecasts, and asserts that Petitioners have failed to show that the Applicant's analysis is unreasonable.<sup>326</sup> The NRC Staff also concurs with the Applicant's assessment of the appropriate ROI.<sup>327</sup> The NRC Staff concludes that Petitioners' assertions and supporting references fail to support the contention or show that the outcome of a different need for power

- <sup>322</sup> <u>Id.</u> at 126.
- <sup>323</sup> Id. at 127.
- <sup>324</sup> <u>Id.</u> at 129.
- <sup>325</sup> Staff Answer at 95-96.
- <sup>326</sup> <u>Id.</u> at 97.

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<sup>&</sup>lt;sup>320</sup> <u>Id.</u>

<sup>&</sup>lt;sup>321</sup> STP Answer at 125.

<sup>&</sup>lt;sup>327</sup> Id. at 97-98

analysis would be material to this proceeding and therefore, the contention must be rejected as inadmissible.<sup>328</sup>

We conclude Contention 26 is inadmissible for failure to raise a genuine dispute with the Application<sup>329</sup>. Petitioners have failed to provide any legal authority for their assertion that the subject ROI is the CPS Energy service area rather than the ERCOT system. Moreover, the Applicant has provided factual support for its selection of ERCOT as the appropriate ROI by demonstrating that there will be a need for power in the entire ERCOT system, which is inclusive of the CPS Energy service area.<sup>330</sup> Petitioners have not controverted this in any way. Likewise, Petitioners have failed to provide any legal or factual support for their claim that the involvement of a municipal utility creates a greater burden on the Applicant's need for power analysis. Even if we were to accept at face value Petitioners' claims of reduced energy consumption, economic downturn, and the retirement of other power generating units, these allegations are insufficient to controvert whether the Applicant's need for power analysis is reasonable.

When petitioners made a similar argument before another Board, that Board explained:

This Board does not decide energy policy, nor do we adjudicate the business wisdom of a proposed investment. Instead, at this stage, we are simply looking for some indication that Petitioners have identified and articulated some concrete allegation as to how or why the ER fails to satisfy some legal requirement (e.g., Part 51), and some understanding as to what will actually be litigated at the evidentiary hearing. This contention is not admissible because it is not plausibly explained or supported by alleged facts.<sup>331</sup>

Similarly here, Petitioners have entirely failed to allege facts or expert opinions that could

create a genuine dispute with the Applicant's analysis of the need for power, and as such, their

<sup>&</sup>lt;sup>328</sup> <u>Id.</u> at 98-99; Tr. at 466.

<sup>&</sup>lt;sup>329</sup> See 10 C.F.R. § 2.309(f)(1)(vi).

<sup>&</sup>lt;sup>330</sup> See ER Section 8.4.4.

<sup>&</sup>lt;sup>331</sup> Levy, LBP-09-10, 69 NRC at \_\_\_ (slip op. at 91).

contention fails to demonstrate a genuine dispute.<sup>332</sup> Accordingly, we conclude this contention is inadmissible for failing to meet the requirements of 10 C.F.R § 2.309(f)(1)(vi).

## r. Contention 27

Petitioners state in Contention 27:

The numerous "construction-related unavoidable impacts" have unacceptable adverse impacts. There should be remediation measures put in place that would effectively address these adverse impacts, but none are described, and apparently none are planned.<sup>333</sup>

Petitioners contend the Applicant has failed to quantify properly the adverse impacts relating to construction activities, including the potential dewatering of the aquifers and wells, impacts to water quality, increased sediment load,<sup>334</sup> increased air emissions and anticipated radiation doses to construction workers.<sup>335</sup> Petitioners also assert the Applicant has failed to provide necessary remediation efforts for these adverse impacts.<sup>336</sup>

Applicant asserts that Petitioners ignore the "extensive discussion in the ER of measures for mitigating construction impacts"<sup>337</sup> that directly address Petitioners' concerns.<sup>338</sup> With respect to Petitioners allegations that construction activities will cause adverse impacts on the Colorado River, the Applicant claims several ER sections<sup>339</sup> establish not only that "impacts of construction on the aquatic ecology of the Colorado River"<sup>340</sup> will be negligible, but that it will implement "mitigative measures"<sup>341</sup> to minimize those adverse impacts that will occur. With respect to Petitioners' claim that construction activities will create excessive air emissions that

<sup>&</sup>lt;sup>332</sup> See 10 C.F.R. § 2.309(f)(1)(vi).

<sup>&</sup>lt;sup>333</sup> Petition at 64.

<sup>&</sup>lt;sup>334</sup> Tr. at 478.

<sup>&</sup>lt;sup>335</sup> Petition at 64-65; Tr. at 483.

<sup>&</sup>lt;sup>336</sup> Petition at 65-66.

<sup>&</sup>lt;sup>337</sup> STP Answer at 130.

<sup>&</sup>lt;sup>338</sup> <u>Id.</u> at 131-33. During oral argument, the Applicant suggested that it plans to construct a slurry wall to a depth of 125 feet below grade. Behind the slurry wall, the Applicant asserted it plans to de-water the area where construction will occur, and that the slurry wall will ensure that the groundwater near the construction site will not be adversely impacted. <u>See</u> Tr. at 471-72. <sup>339</sup> <u>See</u> ER Sections 10.1.1, 3.9S, 4.2, and 4.6.

<sup>&</sup>lt;sup>340</sup> STP Answer at 133.

<sup>&</sup>lt;sup>341</sup> <u>Id.</u> at 134.

are not addressed in the ER, the Applicant claims its ER details mitigative measures.<sup>342</sup> Finally, Applicant disputes Petitioners' assertion that radiation protection is required for construction workers because 10 C.F.R. Part 20 establishes those work areas that might require such monitoring — and this is not one of them.<sup>343</sup> In this regard, the Applicant also argues that ER Section 4.5 indicates that any potential dose to any construction worker for STP Units 3 and 4 will be "below the limits for members of the public in unrestricted areas."<sup>344</sup>

The NRC Staff claims Petitioners have cherry-picked the ER, referring to certain isolated portions but not to others that contain critical information regarding this contention.<sup>345</sup> The NRC Staff also claims that Petitioners' grievances with potential construction impacts, both to the workers and the environment, are discussed in detailed portions of the ER,<sup>346</sup> and that Petitioners fail to controvert the information in these provisions.<sup>347</sup>

We find this contention inadmissible because Petitioners have failed to demonstrate that a genuine dispute exists with the Application.<sup>348</sup> Although Petitioners claim that there will be impacts based on alleged dewatering of local aquifers and wells and the quantity of the drinking water will be negatively impacted, they fail to provide any support for this claim.

Petitioners' contention fails in two fundamental respects. First, as set forth herein, there are several ER sections<sup>349</sup> pertinent to this contention that Petitioners fail to controvert. Second, although Petitioners assert Applicant has failed to analyze certain issues in the ER, they have provided no legal support mandating that such issues be addressed in the ER. Accordingly, we conclude Contention 27 is not admissible.

<sup>&</sup>lt;sup>342</sup> Id. at 130, 135 (citing ER Section 10.1.1, 3.9S.1.1 and Tables 10.1-1 and 4.6-1).

<sup>&</sup>lt;sup>343</sup> STP Answer at 135.

<sup>&</sup>lt;sup>344</sup> Id.

<sup>&</sup>lt;sup>345</sup> Staff Answer at 100-01.

<sup>&</sup>lt;sup>346</sup> <u>See</u> ER Sections 10.1.1, 3.9S, 4.2, 4.6 and Tables 10.1-1 and 4.6-1.

<sup>&</sup>lt;sup>347</sup> Staff Answer at 100-101.

<sup>&</sup>lt;sup>348</sup> See 10 C.F.R. § 2.309(f)(1)(iv) and (vi).

<sup>&</sup>lt;sup>349</sup> See supra note 342.

#### s. Contention 28

Petitioners state in Contention 28:

Whooping cranes and endangered species analysis and protection are inadequate.<sup>350</sup>

Petitioners contend that the ER fails to address potential impacts to the endangered whooping crane. Petitioners claim Section 2.4-4 of the Application places the "wintering habitat" of whooping cranes at only thirty-five miles southwest of STP Units 3 and 4, and assert "the migration of whooping cranes brings them even closer to the nuclear reactor site at times." <sup>351</sup> Petitioners assert that despite the alleged close proximity of whooping cranes to STP Units 3 and 4, Applicant has failed to perform the necessary analysis.<sup>352</sup> Petitioners assert there are reports indicating "at least one crane . . . in the Bay City area"<sup>353</sup> and increased mortality rates for whooping cranes.<sup>354</sup> Petitioners argue the Applicant has also failed to analyze the effects of nuclear reactor accidents on the cranes as well as of the effects of radioactivity on the whooping crane food chain.<sup>355</sup>

Applicant asserts that Petitioners' claim that the ER fails to address all pertinent information about whooping cranes is without any reliable factual support.<sup>356</sup> Applicant also argues that Petitioners have not controverted the Applicant's conclusion in the ER that there "is no critical habitat within or adjacent to the STP site, noting that the whooping crane has not been observed within the STP site."<sup>357</sup>

The NRC Staff interposes similar objections to the admission of this contention, claiming Petitioners have failed to provide the requisite support for their claim that the whooping crane

<sup>351</sup> <u>Id.</u>

<sup>355</sup> <u>Id.</u> at 67.

<sup>&</sup>lt;sup>350</sup> Petition at 66.

<sup>&</sup>lt;sup>352</sup> Id.; see also Tr. at 487.

<sup>&</sup>lt;sup>353</sup> Petition at 66 (citing Aerial Census Report by Tom Stehn (Mar. 14, 2007)).

<sup>&</sup>lt;sup>354</sup> Petition at 66 (citing Report by Tom Stehn (Apr. 7, 2009)).

 $<sup>^{356}</sup>$  STP Answer at 137.

<sup>&</sup>lt;sup>357</sup> <u>Id.</u> (internal footnote omitted).

population will be adversely affected by the operation of STP Units 3 and 4.<sup>358</sup> With respect to Petitioners' allegation that Applicant must analyze the radiation exposure of the whooping crane food chain, the NRC Staff argues that Applicant has performed such an analysis in Section 5.4-5 of its ER. The NRC Staff asserts that this analysis details potential radiological doses using "surrogate species that provide representative information about the various dose pathways potentially affecting broader classes of living organisms."<sup>359</sup> In addition, the NRC Staff claims that Petitioners have failed to provide any legal authority mandating any additional analysis.<sup>360</sup> The NRC Staff also takes issue with Petitioners' claimed support from a Mr. Tom Stehn — who apparently Petitioners wish to use as an expert here — because (1) the NRC Staff maintains Petitioners have failed to retrieve one of Mr. Stehn's reports, making it impossible for the NRC Staff to review the validity of this claim in the contention.<sup>361</sup>

We conclude Contention 28 is inadmissible for failure to raise a genuine dispute with the Application. This contention is footed in Petitioners' concern that construction of proposed STP Units 3 and 4 would endanger the habitat, migration patterns, and food chain of whooping cranes. With respect to Petitioners' primary concerns, Petitioners have not provided any expert support or facts to show that any critical habitat of whooping cranes would be adversely affected by the construction activities for proposed STP Units 3 and 4.<sup>362</sup> Petitioners not only have failed to place a single whooping crane on the proposed site for STP Units 3 and 4.<sup>363</sup> but they can, at best, assert the closest whooping crane sighting to be thirty-five miles from the site.<sup>364</sup>

Additionally, with respect to the whooping crane flight path, Petitioners were unable to

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<sup>&</sup>lt;sup>358</sup> Staff Answer at 103.

<sup>&</sup>lt;sup>359</sup> Id. at 102-03 (quoting STP ER 5.4-5).

<sup>&</sup>lt;sup>360</sup> Staff Answer at 103-04.

<sup>&</sup>lt;sup>361</sup> <u>Id.</u> at 104-05.

<sup>&</sup>lt;sup>362</sup> Given a chance at oral argument to identify any critical habitat that would be adversely affected by the construction activities, Petitioners could not do so. <u>See</u> Tr. at 488. <sup>363</sup> Tr. at 488-89.

<sup>&</sup>lt;sup>364</sup> Tr. at 489-90.

show that there was any migratory flight path in danger of being affected by the site plans.<sup>365</sup> With respect to Petitioners' claim that Applicant has failed to analyze the radiological impacts of the proposed two new units on the food chain, in fact the Applicant addresses this very issue in ER Section 5.4-5<sup>366</sup> — which Petitioners did not controvert.<sup>367</sup> Accordingly, Petitioners have failed to raise a genuine dispute with the Application and their contention is inadmissible under 10 C.F.R. § 2.309(f)(1)(vi).

#### **III.** Conclusion

Having found standing on the part of Petitioners, and admitted one of their contentions, we conclude that the requested hearing in this proceeding should be granted.

#### IV. Order

Based on our conclusions, we hereby ORDER the following:

A. Petitioners SEED, Public Citizen, and the South Texas Association for Responsible Energy are admitted as parties in this proceeding, and their Petition for Intervention and Request for Hearing is granted in part and denied in part. A hearing is GRANTED with respect to their Contention 21.

B. Contentions numbered 1-7, 17-20, and 22-28 are inadmissible and will not be litigated in this proceeding. Contentions 8-16 will be addressed in a separate and subsequent Order.

C. Regarding the conduct of the hearing in this proceeding, as Petitioners have not requested that the hearing be conducted under 10 C.F.R. Part 2, Subpart G, we ORDER that the proceeding be conducted under the procedures set forth at 10 C.F.R. Part 2, Subparts C and L.

D. In October 2009, the Licensing Board will schedule a prehearing telephone conference during which the parties will address relevant scheduling matters in the proceeding,

<sup>365</sup> Tr. at 490-92.

<sup>&</sup>lt;sup>366</sup> <u>See</u> ER Section 5.4-5. <sup>367</sup> Tr. at 496-97.

and thereafter will issue an Order setting forth a schedule of further proceedings in this matter. Prior to such time, the parties may wish to confer in the interest of reaching consensus on scheduling matters and submitting a joint proposal to the Board for its consideration.

E. This Order is subject to appeal to the Commission in accordance with the provisions of 10 C.F.R. § 2.311. Any petitions for review, meeting applicable requirements set forth in that section, must be filed within ten (10) days of service of this Memorandum and Order.<sup>368</sup>

It is so ORDERED.

## THE ATOMIC SAFETY AND LICENSING BOARD

/RA/

Michael M. Gibson, Chairman ADMINISTRATIVE JUDGE

/**RA**/

Dr. Gary S. Arnold ADMINISTRATIVE JUDGE

# /**RA**/

Dr. Randall J. Charbeneau ADMINISTRATIVE JUDGE

Rockville, Maryland August 27, 2009

<sup>&</sup>lt;sup>368</sup> Appeals relative to this ruling need to be made on a timely basis in accordance with 10 C.F.R. § 2.311. There will be a separate order with the decision on contentions 8-16, and that order will contain separate appeals rights.

## UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

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In the Matter of

SOUTH TEXAS PROJECT NUCLEAR OPERATING COMPANY Docket Nos. 52-012-COL and 52-013-COL

(South Texas Project Units 3 and 4)

# CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing MEMORANDUM AND ORDER (RULING ON STANDING AND ADMISSIBILITY OF CERTAIN CONTENTIONS) have been served upon the following persons by the Electronic Information Exchange.

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[Original signed by Nancy Greathead] Office of the Secretary of the Commission

Dated at Rockville, Maryland This 27<sup>th</sup> day of August 2009