NUCLEAR REGULATORY COMMISSION
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
TENNESSEE VALLEY AUTHORITY	)	Docket No. 52-047-ESP
	)	
(Clinch River Nuclear Site	)	
Early Site Permit Application)	)	

NRC STAFF MOTION TO DISMISS CONTENTION 2 AS MOOT AND ANSWER TO INTERVENORS' MOTION FOR LEAVE TO FILE CONTENTION 4 AND CONTENTION 5

INTRODUCTION

Pursuant to the Atomic Safety and Licensing Board's May 7, 2018, Order (Granting Joint Motion for Clarification of Scheduling Order), and the Board's December 7, 2017, Initial Scheduling Order, the NRC Staff hereby files its Motion to Dismiss Contention 2 as Moot. For the reasons discussed further below, the Board should dismiss Contention 2 as moot because the Staff has issued a draft environmental impact statement (DEIS) containing the environmental impacts analysis of spent fuel pool fires that the Southern Alliance for Clean Energy and Tennessee Environmental Coalition (together, Intervenors) argue was improperly omitted from the Tennessee Valley Authority's (TVA or Applicant) Environmental Report.[1] The Staff, Intervenors, and Applicant (collectively, the parties) have also agreed during consultations pursuant to 10 C.F.R. § 2.323(b) that Contention 2 is moot.[2]

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[1] Letter from Ann Hove to the Administrative Judges (Apr. 4, 2018) (Letter to the Board Regarding Public ADAMS Accession Numbers for the Clinch River Nuclear Site DEIS); NUREG-2226, Environmental Impact Statement for an Early Site Permit (ESP) at the Clinch River Nuclear Site, at 5-85 to 5-87 (Apr. 2018) (Agencywide Documents Access Management System "ADAMS" Accession No. ML18100A220) (DEIS); *see Tennessee Valley Authority* (Clinch River Nuclear Site Early Site Permit Application) LBP-17-8, 86 NRC 138 (2017).

[2] Email from Diane Curran to Ann Hove, *et al.*, RE: RE: RE: Consultation pursuant to 10 C.F.R. 2.323 -- TVA SMR ESP case (May 24, 2018) (ADAMS Accession No. ML18159A417); Email from Blake Jon Nelson to Megan Wright, Re: Consultation re: Clinch River (May 30, 2018) (ADAMS Accession No. ML18159A414); Email from Michael G. Lepre to Ann Hove, RE: Clinch River (June 8, 2018) (ADAMS Accession No. ML18162A194).

In addition, pursuant to 10 C.F.R. § 2.309(i) and the Board's December 7, 2017, Initial Scheduling Order, the Staff hereby opposes Intervenors' Motion For Leave To File Contention 4 and Contention 5.[3] In Contention 4, Intervenors argue that the Staff's analysis of spent fuel pool fires in its draft EIS for the TVA early site permit (ESP) application should be more conservative than is required under the National Environmental Policy Act[4] (NEPA) or the NRC's regulations for ESP applications referencing a plant parameter envelope (PPE). In Contention 5, Intervenors argue that the DEIS contains an impermissible analysis of need for power and energy alternatives, but neither TVA's environmental report nor the Staff's DEIS contains an analysis of need for power or energy alternatives and both documents contain statements explaining the absence of these analyses. For these reasons, Contentions 4 and 5 should be rejected for their failure to raise a genuine, material dispute with TVA's ESP application that is within the scope of the proceeding, as required by 10 C.F.R. § 2.309(f)(1)(iii), (iv), and (vi). In Contention 5, Intervenors also raise an issue that was considered and rejected in Intervenors' earlier Contention 3 and therefore fail to address information that is materially different from information previously available as required by 10 C.F.R. § 2.309(c)(1)(i) and (ii). Because Contention 2 is moot and proposed Contentions 4 and 5 are not admissible, the Board should terminate this proceeding in accordance with 10 C.F.R. § 2.318.[5]

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[3] Intervenors' Motion for Leave to File Contention 4 (Inadequate Discussion of Environmental Impacts of Spent Fuel Pool Fires) and Contention 5 (Impermissible Discussion of Energy Alternatives and Need for the Proposed SMR) (May 21, 2018) (Motion); Motion Attachment 1, "NuScale Power, Spent Fuel Pool Safety" (http://www.nuscalepower.com/smr-benefits/safe/spent-fuel-pool) (Motion Attachment 1); Motion Attachment 2 "NuScale Power, Safety Features of the NuScale Design" (http://www.nuscalepower.com/smr-benefits/safe) (Motion Attachment 2); Motion Attachment 3, Declaration of Dr. Edwin S. Lyman in Support of Intervenors' Contention 4 (Inadequate Discussion of Environmental Impacts of Pool Fires) (May 21, 2018) (Motion Attachment 3); Motion Attachment 4, "Declaration of Dr. M.V. Ramana in Support of Intervenors' New Contention 4 (Impermissible Discussion of Energy Alternatives and Need for Proposed SMR) (Motion Attachment 4).

[4] 42 U.S.C. §§ 2011–2297; id. §§ 4321–4347

[5] *Virginia Electric & Power Co.* (Combined License Application for North Anna Unit 3), CLI-12-14, 75 NRC 692, 699, 701 (2012) (stating that a licensing board's "ruling resolving the last pending contention" is equivalent to a final decision under 10 C.F.R. § 2.341, and a licensing board's "jurisdiction ends after it has rendered a final decision"); *see also Exelon Generation Co.* (Byron Nuclear Power Station, Units 1 &

BACKGROUND

TVA submitted its ESP application to the NRC in May 2016.[6] TVA's application is based on a PPE that is a set of parameters that were developed based on four light-water small modular reactors (SMRs) currently under development in the United States.[7] TVA has not selected a design for reactors that might be constructed at the site and has not made a decision to submit a combined license application or go forward with construction of a new plant.[8] As the Board noted, "[a]pproval to construct and operate a nuclear power plant at the Clinch River Site would require a separate NRC authorization and would be the subject of a separate licensing proceeding."[9]

Last year, the Intervenors jointly submitted a petition to intervene with three contentions, including Contention 2, in which they asserted that the Applicant had omitted from its application an analysis of the environmental impacts analysis of spent fuel pool fires.[10] The Board admitted Contentions 2 and 3 in LBP-17-8.[11] On appeal, the Commission overturned the admission of Contention 3, leaving Contention 2 as the sole remaining admitted contention in this proceeding.[12]

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2 et al.), CLI-14-6, 79 NRC 445, 449 (2014) ("Under our practice, 'once all contentions have been decided, the contested [adjudicatory] proceeding is terminated.'" (quoting *North Anna*, CLI-12-14, 76 NRC at 699) (modification in original)).

[6] Letter CNL-16-081 dated May 12, 2016, from J.W. Shea, TVA, to Document Control Desk, NRC, Subject: Application for Early Site Permit for Clinch River Nuclear Site (Letter CNL-16-081) (ADAMS Accession No. ML16139A752).

[7] Tennessee Valley Authority, Clinch River Early Site Permit Application, Part 2: Site Safety Analysis Report, Rev. 1 at 2.0-1 (May 2016) (ADAMS Accession No. ML18003A302); (SSAR, Rev. 1) LBP-17-8, 86 NRC at 143.

[8] *Id*.

[9] LBP-17-8, 86 NRC at 143.

[10] Petition to Intervene and Request for Hearing (June 12, 2017) (ADAMS Accession No. ML17163A417).

[11] *See Clinch River*, LBP-17-8, 86 NRC at 158-65.

[12] CLI-18-5, 87 NRC __ (May 3, 2018) (slip op. at 11-15).

The Staff recently published a notice of availability of the DEIS associated with the Clinch River ESP application in the *Federal Register.*[13] The parties in this proceeding together submitted a Joint Motion for Clarification of Scheduling Order to establish June 11, 2018, as the deadline to submit a dispositive motion based on previously admitted contentions in this proceeding, which the Board granted.[14] Intervenors thereafter filed the instant Motion, in which they request admission of two proposed new contentions—Contentions 4 and 5—which the Intervenors argue are based on the April 26, 2018, publication of the DEIS.

DISCUSSION

I. Legal Standards

A. Mootness

An issue is moot "when a justiciable controversy no longer exists."[15] In other words, when an issue is no longer "live," such that a party no longer has a legal interest in the issue, then it is moot.[16] The Commission has determined that "[w]hen a contention alleges the omission of particular information or an issue from an application, and the information is later supplied by the applicant or considered by the Staff in a draft EIS, the contention is moot."[17] A contention of omission may be dismissed as moot when it is rendered as such "by subsequent

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[13] Early Site Permit Application: Tennessee Valley Authority; Clinch River Nuclear Site, 83 Fed. Reg. 18,354 (Apr. 26, 2018); *see also* Environmental Impact Statements; Notice of Availability, 83 Fed. Reg. 18,554 (Apr. 27, 2018). The DEIS is available at ADAMS Accession Numbers ML18100A220 and ML18100A223.

[14] Order (Granting Joint Motion for Clarification of Scheduling Order) (May 7, 2018) (unpublished) (citing [Tennessee Valley Authority, Southern Alliance for Clean Energy, Tennessee Environmental Council, and NRC Staff] Joint Motion for Clarification of Scheduling Order (May 4, 2018)).

[15] *Luminant Generation Co., LLC*, (Comanche Peak Nuclear Power Plant, Units 3 and 4), LBP-10-10, 71 NRC 529, 540 (2010) (citing *Georgia Inst. of Tech.* (Georgia Tech Research Reactor), LBP-95-19, 42 NRC 191, 194 (1995)).

[16] *See id.* at 541 (citing *Texas Utilities Electric Co*. (Comanche Peak Steam Elec. Station, Unit 2), CLI-93-10, 37 NRC 192, 200 (1993)).

[17] *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 383 (2002) (citations omitted).

license-related documents filed by the NRC Staff that address the alleged omission."[18] Further, the Commission has held that in "cases in which an earlier contention based upon an applicant's environmental report is rendered moot by the NRC's environmental impact statement, resolution of the mooted contention requires no more than a finding by the presiding officer that the matter has become moot."[19]

B. Contention Admissibility

The standards for contention admissibility are well-established and are set forth in 10 C.F.R. § 2.309(f). To be admissible, a proposed contention must:

> i. Provide a specific statement of the issue of law or fact to be raised or controverted . . .;
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> ii. Provide a brief explanation of the basis for the contention;
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> iii. Demonstrate that the issue raised in the contention is within the scope of the proceeding;
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> iv. Demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding;
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> v. Provide a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue; and
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> vi. . . . [P]rovide 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[.][20]

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[18] *Powertech USA, Inc.* (Dewey-Burdock In Situ Uranium Recovery Facility), LBP-13-9, 78 NRC 37 (2013) (citing *McGuire/Catawba*, CLI-02-28, 56 NRC at 383 n.45 and *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 6 and 7), LBP-11-6, 73 NRC 149,199-200 (2011)).

[19] *USEC, Inc.* (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 445 (2006); *McGuire/Catawba*, CLI-02-28, 56 NRC at 384.

[20] 10 C.F.R. § 2.309(f)(1).

The Commission has long recognized a difference between "contentions of omission," which claim an omission of necessary information, and "contentions of adequacy," which "challenge substantively and specifically how particular information has been discussed in a license application."[21] "Contentions of omission generally need not provide the same level of factual support required for a contention challenging the adequacy of information in an application. It is enough for a petitioner to identify the information that is claimed to be missing and demonstrate why that information is required."[22]

To meet 10 C.F.R. § 2.309(f)(1), Intervenors "must present sufficient information to show a genuine dispute" and reasonably "indicat[e] that a further inquiry is appropriate."[23] Intervenors must also demonstrate that an issue raised in a contention is within the scope of the proceeding,[24] and that the issue is "material," which the Commission has defined as an issue where "resolution of the dispute would make a difference in the outcome of the proceeding."[25] And, a licensing board "may not make factual inferences on [a] petitioner's behalf."[26]

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[21] CLI-18-05, 87 NRC at __ (slip op. at 4) (citing McGuire/Catawba CLI-02-28, 56 NRC at 382-83; *Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-10-9, 71 NRC 245, 270 (2010); *Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), CLI-10-2, 71 NRC 27, 36-37 & n.44 (2010)).

[22] *Id.* (citing *McGuire/Catawba*, CLI-02-28, 56 NRC at 379; *Duke Energy Corp.*

(McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-17,

56 NRC 1, 7-8 (2002)).

[23] 10 C.F.R. § 2.309(f)(1)(vi); *Georgia Tech*., CLI-95-12, 42 NRC at 118.

[24] 10 C.F.R. § 2.309(f)(1)(iii); *Nuclear Management Co., L.L.C.* (Palisades Nuclear Plant), LBP-06-10, 63 NRC 314, 338 (2006) (stating requirements of 10 C.F.R. § 2.309(f)(1)(iii) and elaborating that "[c]ontentions are necessarily limited to issues that are germane to the application pending before the Board, and are not cognizable unless they are material to matters that fall within the scope of the proceeding for which the licensing board has been delegated jurisdiction as set forth in the Commission's notice of opportunity for hearing." (footnotes omitted)).

[25] 10 C.F.R. § 2.309(f)(1)(iv); Rules of Practice for Domestic Licensing Proceedings-Procedural Changes in the Hearing Process, 54 Fed. Reg. 33, 168, 33, 172 (Aug. 11, 1989).

[26] *Georgia Institute of Technology* (GA. Tech. Research Reactor, Atlanta, GA.), LBP-95-6, 41 NRC 281, 305, *vacated in part and remanded on other grounds*, CLI-95-10, 42 NRC 1, and *aff'd in part*, CLI-95-12, 42 NRC 111 (1995) (citing *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34, NRC 149, 155-56 (1991)).

Further, relevant here, contentions filed after the date for initial intervention petitions must satisfy the criteria in 10 C.F.R. § 2.309(f)(2); in particular,"[p]articipants may file new or amended environmental contentions after the deadline in paragraph (b) of this section (e.g., based on a draft or final NRC environmental impact statement . . . if the contention complies with the requirements in paragraph (c) of this section." The standards governing the admissibility of a contention proposed after the initial deadline for filing are set forth in 10 C.F.R. § 2.309(c)(1), which provides that such contentions will not be entertained absent a determination by the presiding officer that a participant has demonstrated good cause, showing that: (i) the information upon which the filing is based was not previously available; (ii) the information upon which the filing is based is materially different from information previously available; and (iii) the filing has been submitted in a timely fashion based on the availability of the subsequent information.[27] Intervenors' failure to address these criteria constitutes "reason enough" to reject a proposed new contention.[28] These rules focus the hearing process on real disputes susceptible to resolution in an adjudicatory proceeding.

Finally, the purpose for requiring the Intervenors to establish the basis of each proposed contention is: (1) to assure that the contention raises a matter appropriate for adjudication in a particular proceeding; (2) to establish a sufficient foundation for the contention to warrant further inquiry into the assertion; and (3) to put other parties sufficiently on notice of the issues so that they will know generally what they will have to defend against or oppose.

II. Intervenors Have Established Standing and Have Timely Filed Contention 4.

[27] 10 C.F.R. § 2.309(c).

[28] *Dominion Nuclear Connecticut, Inc.* (Millstone Power Station, Unit 3), CLI-09-5, 69 N.R.C. 115, 126 (2009).

SACE and TEC have both established representational standing to intervene in this proceeding and therefore do not need to establish standing again under 10 C.F.R. § 2.309(d).[29] Also, the Staff does not oppose the Intervenors' position that Contention 4 is submitted consistent with 10 C.F.R. § 2.309(c)(1), and that the Intervenors have demonstrated good cause to file the new contention under 10 C.F.R. § 2.309(b).

However, as explained more fully below, Contention 5 is based primarily on information that has been available since TVA filed its application in May 2016 and raises issues the Commission has already rejected.[30] For these reasons, Contention 5 is untimely.

III. Contention 2 is Moot and the Intervenors Have Not Submitted an Admissible Contention

A. The Parties Agree that Contention 2 is Moot

In accordance with the Board's May 7, 2018, Order and the Board's December 7, 2017, Initial Scheduling Order, the NRC Staff moves to dismiss Contention 2 as moot. Intervenors argue in Contention 2 that TVA's environmental report is deficient and fails to satisfy the National Environmental Policy Act (NEPA) "because it does not address the consequences of a fire in the spent fuel storage pool, nor does it demonstrate that a pool fire is remote and speculative."[31] The Board acknowledged in admitting Contention 2 that it is "strictly a contention of omission" that can be cured by additional information about the risk of spent fuel pool fires.[32]

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[29] LBP-17-8, 86 NRC at 148-49. Under 10 C.F.R. § 2.309(c)(4), parties that have already satisfied the requirements for standing under § 2.309(d) in the same proceeding in which a new contention is filed need not do so again.

[30] *See Clinch River*, CLI-18-5, 87 NRC at __ (slip op. at 15).

[31] *Clinch River*, LBP-17-8, 86 NRC at 158; Southern Alliance for Clean Energy and Tennessee Environmental Council Petition to Intervene and Request for Hearing, at 9 (June 12, 2017) (Intervenors' Hearing Request).

[32] *See Clinch River*, LBP-17-8, 86 NRC at 160, *aff'd*, CLI-18-5, 87 NRC at __ (slip op. at 9).

Because the DEIS[33] includes information sufficient to address this deficiency, Contention 2 is moot.[34] All parties have agreed that Contention 2 is moot.[35]

Section 5.11.2.5 of the DEIS contains an analysis of spent fuel pool accidents, including the likelihood of a spent fuel pool accident and the consequences of such an accident. In section 5.11.2.5, the Staff also explains that the "SMR designs considered by TVA in developing the PPE use the same type of fuel (i.e., the same form of fuel, enrichment, burnup, and fuel cladding)" as that considered in NUREG-1437, Rev. 1, *Generic Environmental Impact Statement for License Renewal of Nuclear Plants* (2013) (License Renewal GEIS).[36] The Staff also states that TVA's parameters related to nuclear fuel "bound or are the same as those applied in the prior spent fuel pool accidents studies" described in the License Renewal GEIS.[37] The Staff further notes in section 5.11.2.5 that the SMR spent fuel pool on the Clinch River site would have to comply with agency requirements addressing mitigation of beyond design basis accidents and that relate to spent fuel pool level instrumentation and mitigation. In addition, to address the applicability of the License Renewal GEIS (which is based on large light-water reactors (LWRs)) to small modular reactors, the Staff further explains in the DEIS that

> the already remote risk of spent fuel pool fires for large LWRs as described in the 1996 version of NUREG—1437 and confirmed in the 2013 version, would be more remote for the SMRs considered in developing the PPE based on the best available information about those SMR designs because (1) the spent fuel pools are assumed to be located underground, (2) the fuel transfer would be expedited

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34 *See* Draft EIS at 5-85 to 5-87.

35 The Staff consulted with representatives of the Intervenors on May 22 and 24, 2018, and the Intervenors agreed that Contention 2 is now moot due to the NRC's issuance of the DEIS. The Staff consulted with the Applicant's representatives on May 30 and June 7 and 8, 2018. The Applicant likewise agreed that Contention 2 is moot. Email from Diane Curran to Ann Hove, *et al.*, RE: RE: RE: Consultation pursuant to 10 C.F.R. 2.323 -- TVA SMR ESP case (May 24, 2018) (ADAMS Accession No. ML18159A417); Email from Blake Jon Nelson to Megan Wright, Re: Consultation re: Clinch River (May 30, 2018) (ADAMS Accession No. ML18159A414); Email from Michael G. Lepre to Ann Hove, RE: Clinch River (June 8, 2018) (ADAMS Accession No. ML18162A194).

36 DEIS at 5-85.

37 *Id.* at 5-85 to 5-86.

> because the pool would be significantly smaller than that of a large LWR and therefore the number of spent fuel assemblies in the pool would be much lower; and (3) implementation of the NRC orders improves the safety of the spent fuel pools and provides mitigating strategies for preventing spent fuel pool fire.[38]

The Staff concludes in the DEIS concludes that "the risks from spent fuel accidents for a design bounded by the PPE [Plant Parameter Envelope] would be lower than the risks of a spent fuel pool severe accident for a large LWR . . . . Therefore, because the impact from the spent fuel pool fires is considered SMALL for large LWRs, it is also SMALL for the SMRs considered for the CRN Site."[39] The omission in TVA's environmental report raised in Contention 2 with respect to spent fuel pool fires at the Clinch River site has been rendered moot by the discussion in Section 5.11.2.5 in the DEIS. As such, the Board should dismiss Contention 2.

B. Proposed Contention 4

The Intervenors' proposed Contention 4 reads as follows:

> The Draft EIS is inadequate to satisfy the National Environmental Policy Act ("NEPA") because its conclusion that environmental impacts of a spent fuel pool accident are small is based on non-conservative or otherwise invalid assumptions that are based on the design characteristics of a light water reactor ("LWR") and compliance by TVA with all current emergency planning requirements.
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> First, the NRC Staff makes assumptions about patterns of fuel usage and storage at LWRs that differ significantly from the characteristics of at least one SMR design included in the proposed "plant parameter envelope" ("PPE") on which the Staff's environmental analysis is based. The Draft EIS fails to analyze those key differences. Second, the NRC Staff makes assumptions in the Draft EIS about the PPE with respect to the quantity of fuel stored in the pool that are neither conservative nor bounding for at least one of the SMR designs that comprise the PPE. Finally, the Draft EIS's environmental analysis is based on the non-conservative assumption that the ten-mile emergency planning zone ("EPZ") around the proposed SMR will be evacuated, when in fact the NRC currently is considering a request by TVA to relax that requirement. Accordingly, the Draft EIS fails to support its assertion that the risk profile for spent fuel pool fires at an LWR is bounding for the proposed SMR.[40]

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[38] DEIS at 5-87.

[39] *Id.*

[40] Motion at 3.

1. Basis for Proposed Contention 4

Intervenors assert that the DEIS does not satisfy NEPA because the spent fuel pool analysis relies on information provided by the Applicant as part of the PPE instead of aspects of specific SMR designs that are outside the scope of the PPE.[41] Intervenors support their claim by referencing graphical presentation information from the NuScale website relating to spent fuel pool design that Intervenors state was "issued" on May 19, 2018, and that the Intervenors admit is not finalized.[42] Intervenors also argue that certain EPZ assumptions the Staff used in its DEIS analysis of environmental impacts of spent fuel pool fires were "not conservative."[43] To support their contention, the Intervenors provide design details obtained from the NuScale website and cite *New York v. NRC* for the proposition that "any environmental analysis of the impacts of reactor operation" must consider the consequences of spent fuel pool fires.[44] As explained more fully below Contention 4 does not meet the contention admissibility requirements or raise an issue suitable for resolution in a hearing on TVA's early site permit application.

2. Contention 4 fails to raise a genuine, material dispute with the application that is within the scope of the proceeding and is therefore inadmissible.

Contention 4 is inadmissible under 10 C.F.R. § 2.309(f)(1)(iii), (iv), and (vi) because it does not identify a genuine dispute with the application that is within the scope of the proceeding and material to the decision the NRC must make on the application. The Staff's analysis in the DEIS meets both NEPA and the NRC's regulations by providing a spent fuel pool

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[41] *See* Motion at 4-11.

[42] *Id.*; Motion Attachment 1, "NuScale Power, Spent Fuel Pool Safety" (http://www.nuscalepower.com/smr-benefits/safe/spent-fuel-pool); Motion Attachment 2 " "NuScale Power, Safety Features of the NuScale Design" (http://www.nuscalepower.com/smr-benefits/safe); Motion Attachment 3, Declaration of Dr. Edwin S. Lyman in Support of Intervenors' Contention 4 (Inadequate Discussion of Environmental Impacts of Pool Fires) (May 21, 2018).

[43] See Motion at 10-12.

[44] Motion at 4; *New York v. NRC*, 681 F.3d 471, 483 (D.C. Cir. 2012).

fire analysis based on the Applicant's proposed PPE.[45] The more "conservative" analysis the Intervenors would have the NRC perform, as described in Contention 4, is not required by NEPA or the NRC's regulations for ESP applications.[46] Because Contention 4 would have the NRC impose additional or stricter requirements than those imposed by NEPA or the NRC's regulations, it should be rejected.[47]

a. NRC regulations do not require a PPE to bound all aspects of designs considered in development of the PPE.

Intervenors' claim that the Staff's analysis does not meet NEPA requirements rests on the Intervenors' assumption that the PPE must bound all aspects of the NuScale design. However, neither NEPA nor the NRC regulations require such a result, and the NRC need not make such a finding in order to grant an ESP.[48] The additional analysis that the Intervenors call for would be based on specific design information that is not within the PPE, and as such, is outside the scope of what TVA requests in its ESP application. Accordingly, Intervenors' desired analysis is outside the scope of the proceeding and therefore is not material to a finding the NRC must make to make a final decision on the ESP, contrary to 10 C.F.R. § 2.309(f)(1)(iii) and (iv). As such, the analysis the Intervenors describe in Contention 4 also fails to raise a genuine dispute with the application, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

A PPE is a set of plant design parameter values that an ESP applicant expects will bound the design characteristics of the reactor or reactors that might be constructed at a given

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[45] DEIS at 5-85 to 5-87.

[46] The Intervenors timely filed their motion to admit Contention 4 based on the Staff's analysis in DEIS Section 5.11; the Staff does not argue that the contention is untimely.

[47] *Luminant Generation Co. LLC* (Comanche Peak Nuclear Power Plant, Units 3 & 4) CLI-12-7, 75 NRC 379, 391-92 (2012); *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 315 (citing *Hells Canyon Alliance v. U.S. Forest Service*, 227 F.3d 1170, 1185 (9th Cir. 2000)), reconsideration denied in 71 NRC 479, CLI-10-15 (2010)).

[48] As the Commission stated in CLI-12-7, "an application-specific NEPA review represents a snapshot in time. NEPA requires that we conduct our environmental review with the best information available today. It does not require that we wait until inchoate information matures into something that later might affect our review." *Comanche Peak*, CLI-12-7, 75 NRC at 391-92.

site.[49] The PPE values are a bounding surrogate for actual reactor design information.[50] Analysis of environmental impacts based on a PPE approach permits an ESP applicant to defer the selection of a reactor design until the construction permit or combined license stage.[51] However, a future combined license applicant referencing the ESP must demonstrate that the design ultimately chosen falls within the site characteristics and design parameters in the ESP. [52] There is no finality associated with design characteristics that fall outside the PPE and an ESP applicant that bases an application on a PPE rather than a specific design bears the risk that the design ultimately selected for the site might fall outside the selected PPE in one or more respects.[53] As the Board explained in the *Grand Gulf* ESP matter,

10 C.F.R. § 52.17(a)(2) requires that the environmental report associated with an ESP application "must focus upon the environmental effects of construction and operation of a reactor, or reactors, which have characteristics that fall within the postulated site parameters," but an ESP applicant is not required to consider potential consequences of severe accidents associated with a specific reactor design.[54] The *Grand Gulf* Board further explained that

> [f]rom an environmental perspective, if the site is acceptable when subjected to those consequences, then the requirements of section 52.17 are satisfied. If at some future date the Applicant elects a specific reactor design whose severe accident consequences do not fall within the PPE employed in this proceeding, the environmental matters may then be litigated under the provisions of section 52.39. However, for the purposes of an ESP, there is no requirement that the Applicant

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[49] NUREG-0800, Section 1.0 at 1.0-12 (ADAMS Accession No. ML112730393).

[50] DEIS Section 1.1.1 at 1-2.

[51] *Id.*

[52] 10 C.F.R. § 51.50(c)(1). The Board in the *Clinton* ESP proceeding recognized this principle as well, stating, "[a]t the [construction permit or combined license] stage, an applicant must demonstrate that the chosen reactor fits within the site parameters set forth in the ESP's PPE, if it wishes to treat as "resolved" any related issues from the ESP review." *See* 10 C.F.R. § 52.39(a)(2)." *Exelon Generation Co., LLC (Early Site Permit for Clinton ESP Site)*,, LBP-06-28, 64 NRC 460, 499 (2006).

[53] 10 C.F.R. § 52.39(c)(i).

[54] *System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), LBP-04-19, 60 NRC 277, 295 (2004), *aff'd*, CLI-05-4, 61 NRC 10 (2005).

> develop and examine a specific reactor design and study its theoretical severe accident consequences.[55]

Similar to the applicant in *Grand Gulf*, TVA has elected to develop a PPE to establish the bounding severe accident consequences that would be associated with the reactor or reactors it may eventually elect to construct on the site under consideration.[56] The Intervenors' arguments regarding the PPE values and the Staff's consideration of those values in the DEIS appear to be based on their assumption that a PPE referenced in the ESP application must consist of specific design information. The Intervenors support their argument that the PPE must fully capture all aspects of the SMR designs considered in the development of the PPE by citing a statement in the DEIS that "TVA's application is based on a PPE that the applicant developed to encompass four light water SMRs under development in the United States at the time of the preparation of the ER . . . The proposed PPE is discussed in more detail in Section 3.2 and Appendix I of this draft EIS."[57] Reading this statement in context of the remainder of the DEIS, including Section 3.2, as well as the ESP application, clarifies that TVA developed the PPE "using input from vendors for four SMR technologies" and did not intend to fully envelope all aspects of the designs.[58] Further, the proposed NRC action related to the TVA application under review "is the issuance of an ESP for the CRN Site approving the site as suitable for the future demonstration of the construction and operation of two or more SMRs with characteristics presented in

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[55] *Id. (citing Grand Gulf*, 60 NRC at 295).

[56] SSAR, Rev. 1, at 2.0-1.

[57] DEIS Section 1.1.1, Page 1-3.

[58] Section 3.2 of the DEIS states with regard to the PPE that it was "developed using input from vendors of four SMR technologies." DEIS Section 3.2.1, Page 3-2. Section 5.11 of the DEIS states that "[c]onsequence estimates are based on the PPE that was developed considering four potential SMR technologies." DEIS Section 5.11, page 5-68. TVA's environmental report acknowledges that "TVA has not yet selected a specific SMR technology. However, the design characteristics of four SMR designs under consideration were used to develop a [PPE] to describe the proposed plant." Environmental Report Section 1.1.2.3, page 1-4. Has there been a full cite to the ER up to this point? If not, add here.

the PPE."[59] TVA acknowledges in its ESP application that selection of a design in a future combined license application "that is demonstrated to be bounded by the PPE maximizes the benefits of the ESP,"[60] but TVA has not based its ESP application on a specific design. If TVA elects to submit a combined license application that features a design with design characteristics that are not bounded by the PPE approved in the ESP, those issues will be reviewed in the context of the NRC's review of the combined license application. The combined license application would itself be subject to NRC review, a mandatory hearing before the Commission, and a public hearing opportunity, and the Intervenors could raise those issues in a request for hearing challenging the combined license application.[61]

Intervenors rely on NuScale design details from the NuScale website that were not submitted as part of the ESP application to support their claim that the Staff made assumptions about fuel usage and storage that differ from "one SMR design included in the plant parameter envelope (PPE)."[62] They argue that those "assumptions" render the DEIS analysis "non-conservative."[63] Contrary to Intervenors' assertions, the Staff made no assumptions about refueling frequency, quantity of fuel in the pool, or the spent fuel pool capacity.[64] Rather, the Staff's analysis is based on the PPE values provided by TVA.[65] If the accident analyses conducted as part of a future combined license application featuring a specific small modular

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[59] DEIS Section 1.0 at 1-1.

[60] ER at 3.1-2. TVA further provides that "[t]he PPE is a composite of SMR and owner-engineered parameters that bound the environmental impacts of construction and operation of the facility." Environmental Report Section 3.0, page 3.0-1.

[61] *Clinch River*, CLI-18-5, 87 NRC at __ (slip op. at 15).

[62] Motion at 3; Motion Declaration 1; Motion Declaration 2; Motion Declaration 3.

[63] Motion at 4-11.

[64] Environmental Report Table 3.1-2, at 3.1-9 (providing that the refueling frequency is 2 years, the spent fuel capacity is 6 years and the number of assemblies per refueling is 96). The storage capacity of the pool was determined by a simple calculation based on these PPE values (96 fuel assemblies every 2 years for 6 years).

[65] Environmental Report Table 3.1-2, at 3.1-9(providing that the refueling frequency is 2 years, the spent fuel capacity is 6 years and the number of assemblies per refueling is 96).

reactor design demonstrate that the consequences of spent fuel pool fires for that design do not fall within the PPE employed in this ESP proceeding, then the environmental matters may be litigated at the combined license stage under the provisions of 10 C.F.R. § 52.39.[66] The Staff's spent fuel pool fire analysis satisfies NEPA and the NRC regulations by evaluating the environmental effects of a reactor, or reactors, that fall within the parameters described in the applicant's PPE. As a result, the assertion that the PPE is not conservative because it does not fully include all aspects of all SMR designs does not raise a litigable issue on this ESP application because it does not identify a genuine dispute with the application that is either within the scope of the proceeding or material to the decision the NRC must reach in this proceeding. Therefore. Contention 4 fails to satisfy 10 C.F.R. § 2.309(f)(1)(iii), (iv) and (vi).

b. Staff's consideration of spent fuel pool fire impacts in the DEIS is sufficient under NEPA.

Intervenors also argue in Contention 4 that the Staff's analysis of spent fuel pool fires in DEIS section 5.11.2.5 is insufficient under NEPA because that analysis relied on prior conclusions from the License Renewal GEIS and from NUREG-2157, *Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel* (2014) (Continued Storage GEIS), which had each assumed an evacuated 10-mile EPZ instead of a 2-mile or site boundary EPZ.[67] In its application, TVA requests an exemption from the 10-mile EPZ requirements in 10 C.F.R. § 50.33, § 50.47(c)(2), and Part 50, Appendix E. If granted, the exemption would approve a *methodology* through which a future applicant in a separate action for a combined license might seek an EPZ size of 2 miles or at the site boundary.[68] In the DEIS, the Staff did consider impacts of spent fuel pool fires at the 2-mile and site boundary EPZ distances.[69]

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[66] *Grand Gulf*, LBP-04-19, 60 NRC at 295

[67] Motion at 11.

[68] *See Clinch River*, LBP-17-8, 86 NRC at ; CLI-18-05, 87 NRC at __ (slip op. at 9).

[69] DEIS at 5-86 to 5-87.

Because TVA chose to reference a PPE in its ESP application, the Staff did not have access to more specific information on the design of the pool that would allow for more precise calculation of pool fire impacts at the shorter EPZ distances. But TVA was not required to supply, nor the Staff to assess, such information. NEPA does not require the Staff to do such an analysis at the ESP stage in the absence of greater pool design detail.[70] For this reason, Contention 4 fails to raise a genuine, material dispute with TVA's ESP application that is within the scope of the proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii).

It is well established that "an application-specific NEPA review represents a 'snapshot' in time. NEPA requires that we conduct our environmental review with the best information available today. It does not require that we wait until inchoate information matures into something that later might affect our review."[71] Further, "[a]n EIS is not intended to be a research document reflecting the latest technology, data, and methods" and does not require the NRC to use the absolutely "best scientific methodology" available.[72] Because there "will always be more data that could be gathered," an agency "must have some discretion to draw the line and move forward with decisionmaking."[73] As the United States Court of Appeals for the Second Circuit has stated: "[A]n EIS is required to furnish only such information as appears reasonably necessary under the circumstances for evaluation of the project, rather than to be so all-encompassing in scope that the task of preparing it would become either fruitless or well nigh

[70] *Comanche Peak*, CLI-12-7, 75 NRC at 391-92.

[71] *Id.*

[72] *Pilgrim*, CLI-10-11, 71 NRC at315 (citing *Hells Canyon Alliance*, 227 F.3d at 1185); *Pilgrim*, CLI-10-15, 71 N.R.C. 479 (2010) (denying reconsideration).

[73] *Id.* (citing *Town of Winthrop v. FAA*, 535 F.3d 1, 11 (1st Cir. 2008)).

impossible."[74] Further, NEPA does not require federal agencies to develop a "worst case analysis."[75]

At its foundation, Contention 4 seeks to relitigate issues that the Board resolved in LBP-17-8 concerning the size of the EPZ that may ultimately be approved for the Clinch River Site in a future combined license application. Contention 4 essentially asks the Board to require specific design information and analyses that are not required for an ESP or under NEPA. As the Board previously noted, TVA has stated that it will conduct a new, design-specific analysis to determine the appropriate size of the EPZ in any future combined license application referencing a specific design.[76] And as the Board noted, the Intervenors will have an opportunity to challenge the size of the EPZ for the Clinch River site and whether an EPZ at a location of either two miles or at the site boundary would meet NRC emergency planning requirements as part of the public hearing opportunity associated with that combined license application.[77] Details about the design of a spent fuel pool that might be selected in the future for the Clinch River site are unknown at this time and are not in any event required for the NRC to make a final decision on the ESP.[78] In the absence of more specific pool design information, NRC Staff's impacts analysis in DEIS Section 5.11.2.5 considered the best available information regarding the severe accidents source term for the designs TVA considered in development of

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[74] *Natural Resources Defense Council, Inc. v. Callaway*, 524 F.2d 79, 88 (2d Cir. 1975).

[75] *Robertson v. Methow Valley Citizens Council*, 490 U.S. at 356 (*see also Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 369-70 (1989) (reversing the court of appeals' decision requiring a "worst case analysis" and citing *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332 (1989)).

[76] Memorandum and Order Granting Intervenors' Motion for Leave to File Motion for Partial Reconsideration, and Denying Motion for Partial Reconsideration, at 5-6 (Nov. 9, 2017) (unpublished) (ADAMS Accession No. ML17313A050) (citing TVA's Response Opposing Intervenors' Motion for Leave to File a Motion for Partial Reconsideration of LBP-17-08 (Oct. 27, 2017) at 7; and Intervenors' Motion for Leave, attach. 1, Letter CNL-17-01 from J.W. Shea, TVA Vice President, Nuclear Regulatory Affairs & Support Services, to Document Control Desk, U.S. NRC (Aug. 24, 2017) (ADAMS Accession No. ML17237A175)).

[77] *Id*.

[78] *See* 10 C.F.R. pt. 52, subpt. A.

the PPE values to extrapolate potential severe accident impacts at the two-mile distance from the Clinch River site and at site boundary.[79] Because Contention 4 raises issues that are outside the scope of this proceeding, not material to the NRC's decision on whether to grant this ESP, and does not raise a genuine dispute with this ESP application, it does not meet 10 C.F.R. § 2.309(f)(1)(iii), (iv), and (vi) and should be rejected.

As Intervenors correctly point out, the Staff has previously concluded in the License Renewal GEIS that "the environmental impacts from accidents involving SFPs [spent fuel pools] are comparable to those from the reactor accidents at full power that were evaluated in the 1996 GEIS, and as such, SFP accidents do not warrant separate evaluation."[80] Because the NRC's prior analyses in in the License Renewal GEIS and the Continued Storage GEIS had already determined that environmental impacts of spent fuel pool fires were small and comparable to those of severe accidents,[81] the NRC found that the environmental risks from spent fuel pool fires at the two-mile distance and at the site boundary would also be comparable to those for severe accidents.[82] As discussed above, the Staff explained in DEIS section 5.11.2.5 how the conclusions in the License Renewal GEIS apply to SMR spent fuel pool fires at the Clinch River site.[83]

The impacts analysis for severe accidents found in the License Renewal GEIS and the Continued Storage GEIS assumed a 10-mile EPZ, in accordance with the NRC's regulations,

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[79] DEIS at 5-85 to 5-87, Apx. G (citing the License Renewal GEIS and Continued Storage GEIS)*; see also* draft EIS at 5-74.

[80] NUREG-1437, Generic Environmental Impact Statement for License Renewal of Nuclear Plants at 1-28 (2013); *see also* Motion at 4.

[81] NUREG 1437, Revision 1 at 1-28 and E-39 (2013).

[82] DEIS at 5-81.

[83] *See* infra pp. 9-10. *See also* Draft EIS at 5-85 to 5-87.

and, again, found that those impacts were small.[84] In the DEIS, the Staff considered whether there is an appreciable difference in risk[85] from severe accidents between the site boundary, 2 miles, and 10 miles.[86] The Staff determined that if the EPZ location were at either the site boundary, 2 miles, or 10 miles, it would not have an appreciable effect on the risk for severe accidents,[87] which as stated above are "comparable to those from the reactor accidents at full power."[88]

Further, the NRC Staff did not rely solely on the analyses and conclusions in the referenced GEISs. The DEIS considered that, unlike large LWRs, SMR designs: (1) are expected to have spent fuel pools located underground; (2) would involve expedited fuel transfer due to a smaller number of spent fuel assemblies in the pool; and (3) that implementation of NRC orders would improve the safety of the spent fuel pools and would provide mitigating strategies for preventing spent fuel pool fire.[89]

In Contention 4, Intervenors do not challenge this analysis. Indeed, the Intervenors fail to articulate why the Staff-analyzed impacts of severe accidents at the three EPZ distances are not comparable to what they would be at those same distances for pool fires, or why the Staff's reliance on the License Renewal GEIS and the Continued Storage GEIS in the DEIS was unreasonable. In fact, Intervenors acknowledge that the "environmental impacts of pool fires are 'comparable to those from the reactor accidents at full power'."[90] Additionally, Intervenors

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[84] 10 C.F.R. §§ 50.33(g), 50.47(c)(2), Part 50, Apx. E, I, 3; Continued Storage GEIS at F-4, D-507, Section F.1 Environmental Impact of Spent Fuel Pool Fires; Continued Storage GEIS at D-507 NUREG-1437 Rev 1 Vol. 3. 10 C.F.R. Part 50, Appendix E.

[85] Draft EIS at 5-76 (discussing how risk is the "product of frequency or probability, and consequences of an accident.").

[86] Draft EIS at 5-74 to 5-75.

[87] *Id.*

[88] NUREG-1437, Generic Environmental Impact Statement for License Renewal of Nuclear Plants at 1-28 (2013).

[89] DEIS at 5-87.

[90] Motion at 4.

do not explain why the NRC Staff must do further analysis of the environmental impacts of fires in a hypothetical spent fuel pool design that does not yet exist and that an applicant need not provide in an ESP application. The NRC Staff's NEPA analysis of the environmental impacts of spent fuel pool fires at the Clinch River site is adequate and reasonable and is based on the information available in the ESP application under review. Accordingly, the Staff is not required to conduct further analysis based on spent fuel pool design details that do not exist at this time. Contention 4 should be rejected.

c. *New York v. NRC* Does Not Support Contention 4

Intervenors argue that the decision in *New York v. NRC* requires "any environmental analysis of the impacts of reactor operation" to consider the consequences of spent fuel pool fires.[91] Contrary to Intervenors' interpretation, the court's holding in *New York* was not that broad. Rather, the court specifically addressed the NRC's generic determination on "whether [spent fuel] pools could be considered safe for an additional thirty years in the future" in the context of what was then called the Waste Confidence Decision and Temporary Storage Rule—a targeted rulemaking that addressed the continued storage of spent fuel at nuclear power plant sites. [92] The court did not address all environmental analyses for reactor operations related to future issuances of reactor licenses or early site permits.[93] The court found that while the NRC's environmental analysis for the rulemaking looked at the probability of pool fires, it did not appropriately examine their consequences in the associated Environmental Assessment for the rule.[94] Subsequently, the NRC issued a final Continued Storage Rule[95] and associated generic

[91] *Id.*

[92] *New York* 681 F.3d at 481.

[93] *Id.* at 483.

[94] *See id.*

[95] Continued Storage of Spent Nuclear Fuel, Final Rule, 79 Fed. Reg. 56,260 (Sept. 19, 2014).

environmental impact statement (GEIS).[96] In sum, the NRC "has assessed generically the environmental impacts of continued storage of spent nuclear fuel and has addressed the issues raised in the D.C. Circuit's [*New York v. NRC*] decision."[97]

Because the Staff's spent fuel pool analysis satisfies NEPA and the NRC's regulations, a PPE need not envelope each design considered in its development, and section 5.11 of the DEIS contains the Staff's analysis of comparable impacts of the three potential EPZ distances, Contention 4 fails to identify a genuine dispute with the application that is within the scope of the proceeding and material to the decision the NRC must reach. Therefore, Contention 4 fails to satisfy 10 C.F.R. § 2.309(f)(1)(iii), (iv) and (vi).

C. Proposed Contention 5

Intervenors' proposed Contention 5 reads as follows:

> The Draft EIS violates NEPA and NRC implementing regulations of 10 C.F.R §§ 51.75(b), 51.20(b), 51.104, and 52.21, by impermissibly incorporating and claiming to be "informed by" assertions by TVA regarding the economic, technical, and other benefits of the proposed SMR, including need for power and alternative energy sources. *See* Section 1.3 at 1-9 – 1-10. The Draft EIS also violates these NEPA regulations by presenting the "no-action" alternative as foregoing benefits (including the asserted benefits of operating the SMRs) rather than avoiding environmental impacts. *Id.* at xxxiii, 1-12, 9-2.
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> Because TVA elected not to address the need for power and energy alternatives in its Environmental Report, CLI-18-05, slip op. at 15, discussion of the benefits associated with *building and operating* the SMR is prohibited from the Draft EIS by Section 51.57(b).[98] By the same token, the Draft EIS' inclusion of construction and operation-related benefits in its "Purpose and Need" statement (Draft EIS at 1-9 – 1-10) goes far beyond the siting related benefits that are may be listed under 10 C.F.R. § 51.75(b) and the Commission's supporting rationale. Final Rule: Licenses, Certifications, and Approvals for Nuclear Power Plants, 72 Fed. Reg. 49,352, 49,430 (Aug. 28, 2007).
>
> In addition, by incorporating TVA's assertions regarding the construction and operation-related benefits of the proposed SMR, at the same time as it claims *not*

[96] *See generally* Continued Storage GEIS.

[97] *Calvert Cliffs 3 Nuclear Project, LLC, and UniStar Nuclear Operating Services, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-14-8, 80 NRC 71, 74-76 (2014).

[98] Intervenors' citation to 10 C.F.R. § 51.57(b) appears to contain a typographical error; the Staff assumes that the Intervenors intended to cite 10 C.F.R. § 51.75(b), which pertains to draft environmental impact statements at the early site permit stage.

> to have evaluated the need for power and energy alternatives, the NRC Staff raises a strong inference that it has included TVA's information in the Draft EIS without conducting its own independent evaluation, in violation of 10 C.F.R. § 51.70.
>
> Finally, Intervenors contend that the Draft EIS' assertions regarding the need for the proposed SMR and the benefits of the proposed SMR in relation to other energy alternatives are not supported, adequately analyzed, or valid. Yet, Intervenors are prohibited by 10 C.F.R. § 52.21 from challenging the assertions as a result of TVA's and the NRC Staff's formal claims not to have addressed them in the Draft EIS. Intervenors respectfully submit that the NRC would violate NEPA's public participation requirements by including and claiming to rely on technical information in the Draft EIS, without permitting interested members of the public an opportunity to challenge the reliability of that information in a hearing. 10 C.F.R. § 51.104.[99]

1. Basis for Proposed Contention 5

Intervenors contend that the DEIS violates the requirements of NEPA and the NRC's implementing regulations by "impermissibly incorporating and claiming to be 'informed by' assertions by TVA regarding the economic, technical, and other benefits of the proposed SMR."[100] Intervenors claim in Contention 5 that the DEIS contains an improper inference regarding the need for power, because the Staff included in the DEIS information provided by TVA related to the need for power and benefits of the proposed SMR. As discussed below, Contention 5 reiterates Intervenors' earlier argument on this issue and is without merit. The Staff simply included TVA's information in the DEIS for completeness; no evaluation of need for power or energy alternatives has been done for this ESP application.[101]

2. Contention 5 fails to meet the requirements of 10 C.F.R. § 2.309(f)(1) and 10 C.F.R. § 2.309(c)(1) and is therefore inadmissible.

Contention 5 is inadmissible under 10 C.F.R. § 2.309(f)(1)(iii), (iv), and (vi) because it does not identify a genuine dispute with the application that is within the scope of the proceeding and material to the decision the NRC must reach. In addition, Contention 5 fails to satisfy 10 C.F.R. § 2.309(c)(i) and (ii) because the information on which Contention 5 is based

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[99] Motion at 12-13.

[100] *Id.* at 12.

[101] *Id.* at 12-13.

was previously available in TVA's environmental report and is not materially different in the DEIS.

a. Contention 5 is inadmissible because it Fails to Raise a Genuine Dispute with the Application that Is Material and within the Scope of the Proceeding and Therefore Fails to Satisfy 10 C.F.R. § 2.309(f)(1)(iii), (iv), and (iv).

As the Commission explained in CLI-18-5, the "determining factor" regarding admissibility of the original Contention 3 was TVA's plain assertion in its environmental report that it opted not to address need for power and energy alternatives in its ESP application.[102] Likewise, the DEIS explicitly provides that "[t]his draft EIS does not include an assessment of the need for power or energy alternatives."[103] Indeed, the draft EIS chapter where need for power would normally be addressed contains no need for power analysis and instead states the following:

> The Tennessee Valley Authority (TVA), has submitted to the U.S. Nuclear Regulatory Commission (NRC) an application for an early site permit (ESP) for a site in Roane County, Tennessee for new nuclear power units demonstrating small modular reactor technology. 10 CFR 51.50, Section (b)(2) does not require an assessment of need for power in an ESP application; The TVA ESP application did not address the need for power. In accordance with 10 CFR 51.75(b) the EIS for an ESP does not address the need for power if the application did not address the need for power.[104]

Similarly, Section 9.2 of the draft EIS provides the following regarding energy alternatives:

> The purpose and need for the NRC-proposed action (i.e., ESP issuance) as identified in Section 1.3 of this draft EIS is to provide for early resolution of site safety and environmental issues, which provides stability in the licensing process. As stated in 10 CFR 51.50(b)(2) and 10 CFR 51.75(b), the analysis of energy alternatives for the proposed TVA SMR project is not required for an ESP, was not addressed in the environmental report for the ESP application, and is therefore not addressed in this EIS.[105]

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[102] *Clinch River,* CLI-18-5, 87 NRC at __ (slip op. at 15).

[103] DEIS at 1-4.

[104] *Id.* at 8-1 (internal citations omitted).

[105] *Id.* at 9-2 (internal citations omitted).

For these reasons, and as explained more fully below, Contention 5 does not raise a genuine dispute with the application. Intervenors assert that because TVA elected not to address the need for power and alternative energy sources in its application, "10 C.F.R. § 51.75(b) prohibits the NRC Staff from *discussing* these topics in the Draft EIS[,]"[106] but that is not what § 51.75(b) provides. Section 51.75(b) states that the draft EIS for an ESP application "must not include an assessment of the economic, technical, or other benefits (for example, need for power) and costs of the proposed action or an evaluation of alternative energy sources 'unless these matters are addressed in the early site permit environmental report.'"[107] As the Intervenors observed, the environmental report *does not address* the need for power or alternative energy sources.[108] As a result, the DEIS does not contain an assessment of these matters and therefore does not violate 10 C.F.R. § 51.75(b). The Intervenors have not raised an issue that is within the scope of this ESP proceeding or material to any of the decisions the NRC must make to act on this application.

Next, Intervenors contend that because the DEIS is "informed" by TVA's statement of purpose and need, a "strong inference" is drawn that the DEIS "has included and used TVA's information" and drawn a conclusion related to benefits of building and operating the proposed SMR without the Staff conducting an independent analysis.[109] However, as the Commission discussed in CLI-18-5, the Staff's reference in the DEIS to language in the TVA environmental report regarding project objectives did not "recast the discussion of the project's purpose into a need for power or energy alternatives" that would "preempt challenges to a discussion of these issues in a future combined license proceeding."[110] The Intervenors have not demonstrated that

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[106] Motion at 20 (emphasis added).

[107] 10 C.F.R. § 51.75(b).

[108] Motion at 20.

[109] *Id.* at 21.

[110] *Clinch River,* CLI-18-05, 87 NRC at __ (slip op. at 15).

the issues they raise concerning the purpose and need statement in the environmental report or the DEIS are within the scope of this ESP proceeding or material to any decision the NRC must make to act on the application.[111]

The DEIS contains a discussion of the purpose and need for the project because it is required by NEPA and the NRC's regulations for environmental impact statements for ESP applications. The Council on Environmental Quality clarifies in its regulations that a purpose and need statement "shall briefly specify the underlying purpose and need to which the agency is responding in proposing alternatives including the proposed action."[112] The purpose and need statement "is developed by the NRC staff, and is informed by the applicant's objectives."[113] Importantly, as the Board in *North Anna* explained, "which alternatives are considered reasonable is determined by the project's goals[,]"[114] and the "project goal is to be determined by the applicant, not the agency: '[a]n agency cannot redefine the goals of the proposal that arouses the call for action.'"[115]

The DEIS states that "[t]he NRC's purpose and need is informed by the applicant's objective to use the power generated by SMRs to address critical energy security issues for TVA Federal direct-served customers (which included only DoD [Department of Defense] or DOE [Department of Energy] facilities)."[116] The DEIS explicitly provides that the additional objectives provided by TVA were *not* considered in the DEIS:

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[111] 10 C.F.R. § 2.309(f)(1)(iii), (iv).

[112] 40 C.F.R. § 1502.13.

[113] Interim Staff Guidance on Specific Environmental Guidance for Light Water Small Modular Reactor, ISG-27 at 6 (ADAMS Accession No. ML14100A153).

[114] *Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), LBP-07-9, 65 NRC 539, 607 (2007) (citing *City of New York v. U.S. Department of Transportation*, 715 F.2d 732, 742 (2d Cir. 1983).

[115] *North Anna*, LBP-07-9, 65 NRC at 607 (quoting *Citizens Against Burlington, Inc. v. Busey*, 938.F.2d 190, 199 (D.C. Cir.), cert. denied, 502 U.S. 994 (1991)).

[116] DEIS at 1-10. While not cited by the Intervenors in their Motion to support their argument, the Staff acknowledges an error in the DEIS. Section 9.3.1.5 erroneously states that "[t]he exclusionary criterion

> Objectives that require the evaluation of design-level information, such as power islanding and SMR design and security features, were not considered in this draft EIS. Deploying SMRs in an incremental fashion to meet power generation needs and to assist in meeting carbon reduction goals were not considered in this draft EIS, because the applicant chose to defer the need for power and alternative energy analysis. However, these objectives could be considered in an EIS for a COL application.[117]

Intervenors also contend that the DEIS violates 10 C.F.R. § 51.70(b) because the Staff's purpose and need is informed by "extensive assertions by TVA" without conducting its own independent evaluation.[118] Section 51.70(b) requires that the Staff independently evaluate "all information used in the draft environmental impact statement."[119] As stated above, the Staff's assessment of the purpose and need for the project was informed by "the applicant's objective to use the power generated by SMRs to address critical energy security issues for TVA Federal direct-served customers (which included only DoD or DOE facilities.)"[120] Because the DEIS clearly explains that the additional objectives quoted by the Intervenors were not considered, the DEIS does not violate 10 C.F.R. 51.70(b). Therefore, Contention 5 fails to satisfy 10 C.F.R. § 2.309(f)(1)(iii), (iv), and (vi).

In addition, Intervenors claim that the DEIS's "no-action alternative" discussion is improper because it presents "the effects of the 'no-action' alternative as foregoing benefits that include operating SMRs."[121] Intervenors are mistaken. The DEIS does mention for completeness that under the no-action alternative a future combined license applicant would not

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related to proximity to targeted customers was based on project objectives associated with assisting Federal facilities to meet carbon-reduction objectives and supplying Federal mission-critical loads with reliable power generation" when in fact and as provided elsewhere in the DEIS it was only based on supplying federal mission-critical loads with reliable power generation. DEIS at 9-8 – 9-9. The Staff will correct the final EIS to clarify that the alternative site selection process did *not* consider carbon-reduction objectives in its determination of potential alternative sites.

[117] DEIS at 1-10.

[118] Motion at 21.

[119] 10 C.F.R. § 51.70(b)

[120] DEIS at 1-10.

[121] Motion at 21.

be able to reference the ESP, but it is clear that the no-action alternative analysis is focused on the consequences of *not issuing* the ESP.[122] The DEIS's analysis of the no-action alternative acknowledges that there are no environmental impacts associated with not issuing the ESP and likewise provides that none of the intended benefits of the ESP process would be realized under the no-action alternative, such as early resolution of issues related to the environmental impacts of construction and operation of new nuclear units that fall within the PPE.[123] Because the no-action alternative analysis properly focuses on not issuing the ESP, Contention 5 fails to raise a genuine dispute.

Contention 5 is not materially different from Contention 3, which the Commission has already rejected. Intervenors' claim that need for power and energy alternatives are implicitly addressed in the DEIS does not raise a genuine dispute that is within scope and material to findings the NRC must make in this proceeding. As discussed above, the DEIS clearly states that the need for power and energy alternatives are not addressed and these items are therefore not resolved as part of the ESP application. Contention 5 should be rejected.

b. Contention 5 is inadmissible because it fails to challenge new or materially different information in the DEIS and therefore fails to satisfy 10 C.F.R. § 2.309(c)(1)(i) and (ii).

The standards in 10 C.F.R. § 2.309(c)(1) require a new or amended contention to demonstrate that (i) the information upon which the filing is based was not previously available; (ii) the information upon which the filing is based is materially different from information previously available; and (iii) the filing has been submitted in a timely fashion based on the availability of the subsequent information. While proposed Contention 5 was filed within 30

[122] DEIS at 9-1 (stating "the construction and operation of a new nuclear power plant at the proposed location on the CRN Site in accordance with the 10 CFR Part 52 (TN251) process referencing an approved ESP would not occur. Under the no-action alternative the NRC would not issue the ESP.").

[123] DEIS at 9-1 – 9-2.

days of the Staff's publication of the DEIS, it raises issues that are substantially similar to Contention 3, which challenged the same language in TVA's environmental report.

In overturning the admission of Contention 3, the Commission in CLI-18-5 observed that the "determining factor" was TVA's express statements that need for power and alternative energy sources were not addressed in the environmental report.[124] Similarly, here, the DEIS *explicitly provides* that need for power and energy alternatives are not addressed.[125] The DEIS references the language from TVA's environmental report that was the subject of Contention 3.

Further, as Intervenors acknowledge, while the DEIS quotes information from TVA's environmental report for completeness, that language does not serve as the basis for any analysis on which to draw conclusions on need for power or energy alternatives.[126] Because this information was previously available in the TVA's environmental report and is not materially different in the DEIS, Contention 5 does not satisfy 10 C.F.R. § 2.309(c)(1)(i) and (ii). More importantly, however, as discussed above, no findings have been made in the DEIS regarding need for power and energy alternatives, nor will such findings be made in this ESP proceeding. These issues are deferred to a subsequent combined license application, at which time the Intervenors may challenge the analysis.

CONCLUSION

For the reasons set forth above, Contention 2 should be dismissed as moot. Contentions 4 and 5 should be rejected for failure to satisfy the contention admissibility requirements of 10 C.F.R. § 2.309(f)(1)(iii), (iv) and (vi). Further, Contention 5 should be rejected for the additional reason that it does not meet 10 C.F.R. § 2.309(c)(1)(i) and (ii). Because Contention 2 is moot and proposed Contentions 4 and 5 are not admissible, the Staff

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[124] *Clinch River*, CLI-18-5, 87 NRC at __ (slip op. at 15).

[125] DEIS at 8-1, 9-2.

[126] Motion at 18.

respectfully requests that the Board terminate this proceeding in accordance with 10 C.F.R. § 2.318.

CERTIFICATION

I certify that in accordance with 10 C.F.R. § 2.323(b), I have made a sincere effort to make myself available to listen and respond to the Intervenors regarding their Motion requesting admission of Contentions 4 and 5, as well as their position regarding the Staff's Motion to Dismiss as Moot Contention 2. Intervenors indicated in a May 24, 2018, email that they plan to submit a response to the Staff's Answer and will indicate that they agree that Contention 2 is moot.[127] The NRC Staff consulted with the Applicant's representatives in phone conversations on May 30 and June 7, 2018 and through email on June 8, 2018. The Applicant agreed that Contention 2 is moot.[128]

Respectfully submitted,

/Signed (electronically) by/

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/Executed in accord with 10 C.F.R. § 2.304(d)/

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Executed in Kirkland, Washington
this 11th day of June, 2018

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[127] Email from Diane Curran to Ann Hove, *et al.*, RE: RE: RE: Consultation pursuant to 10 C.F.R. 2.323 -- TVA SMR ESP case (May 24, 2018) (ADAMS Accession No. ML18159A417).

[128] Email from Blake Jon Nelson to Megan Wright, Re: Consultation re: Clinch River (May 30, 2018) (ADAMS Accession No. ML18159A414); Email from Michael G. Lepre to Ann Hove, RE: Clinch River (June 8, 2018) (ADAMS Accession No. ML18162A194).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
TENNESSEE VALLEY AUTHORITY	)	Docket No. 52-047-ESP
	)	
(Clinch River Nuclear Site	)	
Early Site Permit Application)	)	

CERTIFICATE OF SERVICE

I hereby certify that the foregoing "MOTION TO DISMISS CONTENTION 2 AS MOOT AND ANSWER TO INTERVENORS' MOTION FOR LEAVE TO FILE CONTENTION 4 AND CONTENTION 5" dated June 11, 2018, has been filed through the E-Filing system this 11th day of June, 2018.

/Signed (electronically) by/

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Executed in Kirkland, Washington
this 11th day of June, 2018