October 27, 2017

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of	)	
	)	Docket No. 52-047-ESP
Tennessee Valley Authority	)	
	)	
Clinch River, Early Site Permit	)	ASLBP No. 17-954-01-ESP-BD01
	)	

TENNESSEE VALLEY AUTHORITY'S RESPONSE OPPOSING INTERVENORS' MOTION FOR LEAVE TO FILE A MOTION FOR PARTIAL RECONSIDERATION OF LBP-17-08

I. INTRODUCTION

Pursuant to 10 CFR § 2.323(e), the Tennessee Valley Authority ("TVA") respectfully submits this response opposing the Southern Alliance for Clean Energy and the Tennessee Environmental Council's (collectively, "Intervenors") motion for leave to file a motion for partial reconsideration of LBP-17-08 ("Motion"), dated October 20, 2017. Intervenors' Motion continues to misunderstand TVA's exemption requests submitted in the early site permit application ("ESPA"), which have two parts: (1) replace the deterministic 10-mile plume exposure pathway ("PEP") emergency planning zone ("EPZ") with a dose-based EPZ that ensures the protection of public health and safety using the dose-based methodology in Section 13.3 of the Site Safety Analysis Report ("SSAR")[1] ("Section 13.3 methodology"), which takes into account credible accidents (both design basis and beyond design basis),[2] to be calculated at

[1] *See* SSAR, Section 13.3.3 at 13.3-6 – 13.3-14.

[2] *Id*., Section 13.3.3.1.4 at 13.3-13, which includes "[a]pplicable fuel handling accidents and spent fuel pool accidents."; *see also id.* Section 13.3.3.1, *et seq.*

the combined license ("COL") stage based on a design-specific analysis[3] and (2) to determine that the major features emergency plans in Part 5A and Part 5B are adequate ***if*** the Section 13.3 methodology results in either a site boundary ("SB") EPZ (Part 5A) or a 2-mile EPZ (Part 5B) using the exemptions from the emergency planning regulations contained in Part 6, Table 1-1 and Table 1-2 (SB EPZ) or Table 1-3 (2-mi EPZ), respectively. The Part 5A or Part 5B major features emergency plan could be incorporated by reference at the COL stage ***if and only if*** the Section 13.3 methodology at the COL stage results in a SB EPZ or a 2-mile (or less) EPZ.[4]

Intervenor's Contention 1 is premised on the incorrect assumption that TVA is seeking to finalize a particular EPZ size in this proceeding.[5] TVA is not requesting the Nuclear Regulatory Commission ("NRC") Staff to finalize a particular EPZ size in this proceeding, but is, *inter alia*, requesting to use a dose-based Section 13.3 methodology, which could result in a smaller than 10-mile EPZ or a larger than 10-mile EPZ depending on the design-specific dose calculations.[6] Intervenors also misunderstand TVA's response to a Request for Additional Information ("RAI") initiated by the NRC Staff,[7] which did not change, in any respect, the exemptions requested in the ESPA.[8] Intervenors, therefore, have not demonstrated compelling circumstances or an error in LBP-17-08,[9] as required by 10 CFR § 2.323(e). The Motion should be denied.

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[3] *Id.*, Section 1.3.3.1.4.

[4] *See id.*, Section 1.3.3.1.4 at 13.3-13 – 13.3-4; *see also* Part 6, Section 1.1 at 1 ("The requested exemptions would require the SMR design selected for the Combined License Application (COLA) to meet the established criteria at the selected EPZ boundary.").

[5] Intervenors' "Petition to Intervene and Request for Hearing," dated June 12, 2017 ("Petition to Intervene") at 1-2.

[6] Part 6, Section 1.2 at 2 ("The selected EPZ size will be determined based upon the SMR design selected in the preparation of the COLA.").

[7] Letter from TVA to NRC Document Control Desk, re: Response to Request for Additional Information Related to Emergency Planning Exemption Requests in Support of Early Site Permit application for Clinch River Nuclear Site (Aug. 24, 2017) (ADAMS Accession No. ML17237A175) ("RAI Response").

[8] *See* RAI Response at E1-10.

[9] LBP-17-08, Memorandum and Order ("Order").

II. FACTUAL BACKGROUND

Contention 1 is premised on the misunderstanding that TVA is seeking to have a particular EPZ size finalized for the Clinch River Nuclear ("CRN") Site in this proceeding:

> Contention 1 challenges TVA's application for an exemption from NRC's emergency planning requirements with respect to the establishment of a ten-mile emergency planning zone ("EPZ"). As demonstrated in the contention, TVA has failed to justify its proposal to reduce the size of the EPZ to the site boundary, or in the alternative a two-mile radius.[10]

The Motion also makes it clear that this misunderstanding is still the basis for Intervenors' request for leave to seek reconsideration.[11] TVA does not seek to finalize a particular EPZ size in this proceeding, but to use the dose-based approach of the Section 13.3 methodology at the COL stage, which may result in a less than 10-mile EPZ or a greater than 10-mile EPZ.[12]

Part 6 also requests that the NRC determine that the proposed exemptions in ESPA, Part 6, Table 1-1 and Table 1-2 are sufficient to enable the NRC to determine that the major features emergency plan contained in Part 5A is adequate ***if the analysis at the COL stage***, using the Section 13.3 methodology, determines that there is adequate protection of public health and safety using a SB EPZ,[13] such that the approved ESPA, Part 5A major features emergency plan could be incorporated by reference into the complete emergency plan at the COL stage.

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[10] Petition to Intervene at 1-2.

[11] Motion at 3 ("The ASLB's conclusion is contradicted by language in SSAR Chapter 13, the very same portion of the ESP application the ASLB relies on for its conclusion that the sole subject of TVA's exemption application is the methodology by which it will establish the EPZ size *at the COL stage*.") (emphasis in original).

[12] Part 6, Section 1.2 at 2 ("The selected EPZ size will be determined based upon the SMR design selected in the preparation of the COLA."). *See also* SSAR, Section 13.3.3.1.4 ("The COLA will apply the methodology in Subsection 13.3.3.1.1 for EPA PAG and Subsection 13.3.3.1.2 for Substantial Reduction in Early Health Effects to the selected SMR reactor technology to determine an acceptable PEP EPZ."); Part 6, Section 1.3 at 3 ("During preparation of a COLA, when TVA has selected a reactor design, the appropriate EPZ will be selected based on the SMR design that conforms to the criteria established in SSAR Section 13.3.").

[13] Part 6, Section 1.2 ("The two distinct Emergency Plans and the two sets of exemptions are based on the distance at which the selected SMR reactor technology is able to demonstrate that it meets the criteria set forth in Site Safety Analysis Report (SSAR) Section 13.3. The applicability of ***any exemption would be based on the SMR design selected for the COLA falling within the parameters set forth in SSAR Section 13.3***.") (emphasis added).

Likewise, ESPA, Part 6 requests that the NRC determine that the proposed exemptions in ESPA, Part 6, Table 1-3 are sufficient to enable the NRC to determine that the major features emergency plan contained in ESPA, Part 5B is adequate ***if the analysis at the COL stage***, using the Section 13.3 methodology, determines that there is adequate protection of public health and safety using a 2-mile EPZ,[14] such that the approved Part 5B major features emergency plan could be incorporated by reference into the complete emergency plan at the COL stage.

Granting the exemptions in Part 6 does not result in the approval of either a SB EPZ or a 2-mile EPZ in this proceeding. The size of the EPZ will be determined, using the Section 13.3 methodology, at the COL stage.[15] If the design-specific analysis at the COL stage does not demonstrate that there is adequate protection of public health and safety using the Section 13.3 methodology, ***neither*** major features emergency plan approved at the ESP stage would be incorporated by reference into the final emergency plan at the COL stage. Under those circumstances, a new emergency plan would accompany the COL application.[16]

On July 28, 2017, the NRC Staff submitted to TVA an RAI,[17] wherein the NRC requested that TVA answer a series of questions regarding the exemption requests in Part 6 and asked, *inter alia*, TVA to provide additional information and to demonstrate that "potential reactor facilities that would be encompassed within the surrogate design and PPE," could meet "the proposed accident consequence criteria … at a given EPZ boundary distance ...."[18] The RAI Response clearly states that the analysis is an example "[t]o demonstrate that the proposed accident consequence technical criteria presented in CRN Site ESPA SSAR Section 13.3 can be

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[14] *Id.*

[15] *See* Note 13, *supra*.

[16] SSAR, Section 13.3.3.1.4 at 13.3-13.

[17] US NRC Request for Additional Information No. 7, eRAI-8885, ESPA Application Section: Part 6 - Exemptions and Departures, EP Exemptions, dated July 28, 2017 (ADAMS Accession No. ML17209A401) ("RAI").

[18] RAI at 4.

met by a design contemplated by the PPE."[19] The RAI Response further clarifies: "Because the purpose of the analysis is to demonstrate that a vendor technology contemplated by the PPE can meet ESPA SSAR Section 13.3 acceptance criteria, it was performed for a specific technology and ***not the surrogate plant developed in the PPE***."[20]

III. LEGAL STANDARD

Under 10 C.F.R. § 2.323(e), Intervenors must show "compelling circumstances, such as the existence of a clear and material error in a decision, which could not have reasonably been anticipated, that renders the decision invalid." The Commission revised the Rules of Practice in 2004 with respect to motions for reconsideration by adopting a "compelling circumstances" standard, stating that:

> The Commission has decided that the "compelling circumstances" standard should be utilized for motions for reconsideration. This standard, which is a higher standard than the existing case law, is intended to permit reconsideration only where manifest injustice would occur in the absence of reconsideration, and the claim could not have been raised earlier. In the Commission's view, reconsideration should be an extraordinary action and should not be used as an opportunity to reargue facts and rationales which were (or should have been) discussed earlier.[21]

Motions to reconsider must establish an error in the earlier decision, based on the arguments made initially, the identification of an overlooked controlling decision or a factual clarification. *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-27, 61 NRC 145, 153 (2004); *Dominion Nuclear Connecticut, Inc*. (Millstone Nuclear Power Station, Unit 2), CLI-03-18, 58 NRC 433, 434 (2003).

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[19] RAI Response at E1-7.

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

[21] 69 Fed. Reg. 2,182, 2,207 (Jan. 14, 2004).

IV. ARGUMENT

A. The ASLB Did Not Commit Error in Rejecting Contention 1

Intervenors' request leave to file a motion for reconsideration because they believe that the "ASLB clearly erred by deciding that TVA had applied only for an exemption for its methodology."[22] Intervenors then repeat their misunderstanding that TVA is seeking a reduced-size EPZ be finalized in this proceeding.[23] As discussed in Section II, *supra*, TVA does not seek to finalize a particular EPZ size in this proceeding. The ASLB did not make the alleged error that Intervenors assert. In the Order, the ASLB correctly stated that the exemptions sought in this proceeding will not finalize a particular EPZ size for the CRN Site, but that the EPZ size will be finalized at the COL stage.[24] The Order also reflects the fact that "TVA does not want the NRC to evaluate its emergency plans under the NRC's existing regulations. [TVA] has asked for exemptions."[25] The Order further correctly states that those exemptions are set forth in Part 6 in "two tables of marked-up rules to illustrate the exemptions requested."[26] As the ASLB recognized, TVA's exemption requests in Part 6 are for the NRC to evaluate TVA's proposed major features emergency plans in Part 5A and Part 5B using the exemptions requested in Part 6 based on a SB EPZ and a 2-mile EPZ to determine whether those major features emergency plans would be acceptable for those ***potential*** EPZ sizes.[27] Whether one of those major features emergency plans would be able to be incorporated by reference into a final emergency plan at the

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[22] Motion at 2.

[23] *See, e.g.*, Motion at 3 ("TVA seeks exemptions both for (a) two alternative reduced-size emergency planning zones ("EPZs") at the early site permit ("ESP") stage ….").

[24] Order (slip op.) at 19 (footnote omitted).

[25] Order (slip op.) at 16.

[26] Order (slip op.) at 19 (citing SSAR, Rev. 0, at 13.3-13 to 13.3-14).

[27] This approach was also specifically addressed by TVA at oral argument: "What we're asking for is if we demonstrate ***at COLA*** that we have the site boundary EPZ this emergency plan is acceptable. If we demonstrate ***at COLA*** a 2-mile EPZ a second emergency plan is acceptable. If we are to a 10-mile EPZ we will submit a new emergency plan with the 10-mile EPZ ***at COLA***." Tr. at 86 (Nelson) (emphases added).

COL stage depends on whether TVA can demonstrate that it qualifies for a SB EPZ or a 2-mile EPZ using the methodology in Section 13.3.[28]

Intervenors apparently do not distinguish between (1) a determination by the NRC that the major features emergency plans would be adequate if the SSAR, Section 13.3 criteria are met at the COL stage and (2) absolute approval of a reduced EPZ size in this ESP proceeding. The ASLB correctly recognized the distinction when the ASLB stated: "In summary, Contention 1 is premised on Petitioners' mistaken belief that the application requests use of an emergency planning zone that would ***necessarily*** be smaller than the currently-required ten-mile radius. No such exemption request has been made."[29] TVA's request for the NRC to review the major features emergency plans in the ESP proceeding for adequacy in light of the exemptions requested in Part 6, Tables 1-1 through 1-3, does not mean that the EPZ size at the COL stage will ***necessarily*** be smaller than the currently required ten-mile radius.[30] The ASLB clearly understood the distinction that Intervenors do not.

B. Intervenors Misunderstand the RAI Response

Intervenors either misunderstand or try to conflate the surrogate design referenced in Section 13.3 with the example analysis in the RAI Response,[31] when the two things are not the same. A surrogate plant, as described in the ESPA, Section 1.1 is defined in NEI 10-01, *Industry*

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[28] SSAR, Section 13.3.3.1.4 at 13.3-13 ("If the dose consequences of the selected technology exceed the EPA PAG or present a substantial risk that doses at which significant early health effects may occur for the PEP EPZ boundary at a two-mile radius, then neither Emergency Plan included in Part 5 of this ESPA will be incorporated by reference in the COLA and a new Emergency Plan will be included in the COLA for NRC review.").

[29] Order (slip op.) at 21 (emphasis added).

[30] Part 6, Section 1.3.4 at 5 ("The criteria established in the ESPA require the SMR design to demonstrate in the COLA that any accident consequences are less than the EPA PAG criteria and meet specific risk reduction criteria (see SSAR Subsection 13.3.3.1.1) for the Emergency Plan and the size of the PEP EPZ in the ESPA to be used. If the SMR design selected does not meet those criteria, the smaller EPZ will not be used.")

[31] *See, e.g.*, Motion at 3 ("At the ESP stage, the criteria are now being applied to a 'surrogate' design that envelopes a range of specific designs …."); *id.* at 4 "TVA is in the process of applying the criteria now, in this proceeding, to a 'surrogate' design.") (citations omitted).

Guideline for Developing a Plant Parameter Envelope in Support of an Early Site Permit.[32] TVA expressly states in the RAI Response that it ***is not*** conducting an analysis using the surrogate plant, but using one technology as an example.[33] The "representative analysis" uses information available for the NuScale design,[34] it is not an analysis of the surrogate plant. Thus, the premise of Intervenors' request for leave to file a motion for partial reconsideration is false.

Intervenors repeatedly assert that the RAI Response shows that TVA is seeking a reduced size EPZ for a surrogate plant in this proceeding.[35] This is not correct. The RAI Response was submitted, *inter alia*, to demonstrate that "potential reactor facilities that would be encompassed within the surrogate design and PPE," could meet "the proposed accident consequence criteria … at a given EPZ boundary distance ...."[36] TVA states that it is being provided to show that "the proposed accident consequence technical criteria presented in CRN Site ESPA SSAR Section 13.3 can be met by a design contemplated by the PPE …."[37] Likewise, the RAI Response states that TVA will conduct a new, design-specific analysis at the COL stage.[38] It is unclear why Intervenors raise concerns about TVA's considering spent fuel accidents.[39] The Section 13.3

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[32] "The PPE is used to define what is in effect a 'surrogate plant' that can bound two or more technologies. This surrogate plant is used as an input for the analyses needed to support the development of the ESP application." NEI 10-01, Section 3.4 at 15.

[33] RAI Response at E1-7 ("Because the purpose of the analysis is to demonstrate that a vendor technology contemplated by the PPE can meet ESPA SSAR Section 13.3 acceptance criteria, it was performed for a specific technology and not the surrogate plant developed in the PPE.).

[34] *Id.* (" [A] representative analysis has been performed by one SMR vendor (NuScale).").

[35] *See, e,g,*, Motion at 4 ("The attached RAI Response shows that TVA is applying the methodology now, in this ESP proceeding …."); *id.* ("As demonstrated by the RAI Response, however, TVA is in the process of applying the criteria now …."); *id*. at 5 ("TVA contemplates that the EPZ size will be established in this proceeding …").

[36] RAI at 4.

[37] RAI Response at E1-7.

[38] *See, e.g.*, RAI Response at E1-2 ("At COLA, the selected SMR design must conform to these criteria."); *id.* at E1-11 ("The COLA will apply the methodology in SSAR Subsection 13.3.3.1.1 for EPA PAG and SSAR Subsection 13.3.3.1.2 for Substantial Reduction in Early Health Effects to the selected SMR reactor technology to determine an acceptable EPZ.").

[39] *See, e.g.*, Motion at 2; *id*. at 4; *id*. at 5.

methodology requires evaluation of spent fuel accidents,[40] which were determined to be not credible by the NuScale-developed probabilistic risk assessment ("PRA").[41]

Intervenors also assert that the RAI Response is inconsistent with statements by TVA counsel.[42] This is not correct because Intervenors have misunderstood the RAI Response, as discussed above. The appropriate size of the EPZ for the CRN Site will be determined at the COL stage using a design-specific analysis. This is also why Intervenors' repeated and speculative assertions about TVA's intent[43] are also incorrect.

C. Intervenors Have Not Met the Legal Standard

NRC's regulations under 10 C.F.R. § 3.323(e) require compelling circumstances for leave to request reconsideration, which require there to be "manifest injustice" in the absence of reconsideration. Intervenors' Motion does not address the manifest injustice they believe will occur in the absence of reconsideration. Intervenors do assert that they will be prejudiced at the COL stage, again, on the apparent misunderstanding that TVA is requesting the EPZ size for a facility to be located at the CRN Site to be finalized in the ESP proceeding.[44] Because TVA is not requesting that a particular EPZ size be finalized in this proceeding, Intervenors cannot be "prejudiced." What TVA has requested is described in Sections II and IV.A, *supra*. The RAI Response, as discussed in Section IV.B, *supra*, does not request a decreased EPZ size, nor does it represent the "surrogate design." At the COL stage, TVA will submit a design-specific analysis

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[40] Intervenors assertion that this somehow is contradictory to a statement that the actual design-specific review will occur at the COL proceeding, *see* Motion at 4, is likewise not correct. TVA will conduct the design-specific analysis at the COL stage.

[41] RAI Response at E1-9.

[42] Motion at 4.

[43] *See, e.g.*, Motion at 3 ("At the ESP stage, the criteria are now being applied to a "surrogate" design that envelopes a range of specific designs; and at the COL stage they will be applied to the specific design chosen by TVA, only as a confirmatory measure."); *see also id.* at 5 ("TVA contemplates that the EPZ size will be established in this ESP proceeding, and the only changes at the COL stage will consist of revisions."); *id*. at 6.

[44] Motion at 4-5.

using the Section 13.3 criteria including evaluation of spent fuel pool accidents based on the PRA of the selected design.[45] The PRA, *inter alia*, will determine if spent fuel accidents are credible events for the selected design.[46] Despite Intervenors' assertions to the contrary, Intervenors would have the opportunity to contest any such analysis in the COL proceeding pursuant, *inter alia*, to 10 C.F.R. § 52.39(c)(i), (ii), and/or (iv), depending on the basis of the challenge asserted by Intervenors. Therefore, there can be no prejudice arising out of the RAI Response or the ESPA itself.

Moreover, there is no basis for the claim that Intervenors "could not reasonably have anticipated the ASLB's error,"[47] because as discussed in Sections II and IV.A, *supra*, there was no error. Similarly, for the reasons discussed in Section IV.B, *supra*, TVA has not requested that the EPZ size be finalized at less than 10 miles in the RAI Response, contrary to Intervenors' assertions.

V. CONCLUSION

For the foregoing reasons, the Motion should be denied.

Respectfully submitted,
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October 27, 2017

[45] SSAR Section 13.3.3.1.4 at 13.3-13.
[46] *Id.*
[47] Motion at 5.

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CERTIFICATE OF SERVICE

I certify that, on October 27, 2017, a copy of "Tennessee Valley Authority's Response Opposing Intervenors' Motion for Leave to File a Motion for Reconsideration" was served electronically through the E-Filing system on the participants in the above-captioned proceedings.

/signed electronically by/
Blake J. Nelson