

## U.S. NUCLEAR REGULATORY COMMISSION PUBLIC MEETING SUMMARY

**Title:** Meeting between the U.S. Nuclear Regulatory Commission (NRC) and Tennessee Valley Authority (TVA) to Discuss Topics Associated With TVA's Early Site Permit Application for the Clinch River Nuclear Site [Cultural Resources and Transportation]

**Meeting Identifier:** 20170464, Agencywide Document Access Management System (ADAMS) Accession No. ML17242A085

**Date of Meeting:** Wednesday, August 30, 2017

**Location:** One White Flint North (OWFN) and via teleconference

**Type of Meeting:** Category 1

### **Purpose of the Meeting:**

To discuss topics associated with TVA's early site permit application for the Clinch River Nuclear Site that required clarification and/or technical interactions.

The specific topics discussed were outlined in an attachment to the meeting notice under "Related Documents" (ADAMS Accession No. ML17242A158) and were as follows:

#### 1. Cultural Resources

A purpose of the public meeting is to discuss the revised information concerning the cultural resources submitted by TVA in the TRC [Environmental Corporation] 2011 letter report (Karpynek 2011); the May 20, 2015, letter from the applicant to the State Historic Preservation Office (see Appendix A of the Environmental Report (ER), ADAMS Accession No. ML16144A145); and the August 1, 2017 audit response (Response to CR-04 Part 1, ADAMS Accession No. ML17234A002).

#### 2. Transportation

Title 10 *Code of Federal Regulation* (10 CFR) 52.17(a)(2) requires the applicant to provide a complete ER as required by 10 CFR 51.50(b) which shall contain the information specified in 10 CFR 51.51(b). Specifically, for reactors not meeting the conditions of paragraph (a) of 10 CFR 51.51, the ER shall contain a full description and detailed analysis of the environmental effects of transportation of fuel and wastes to and from the reactor, including values for the environmental impact under normal conditions of transport and for the environmental risk from accidents in transport and shall indicate that the values determined by the analysis represent the contribution of such effects to the environmental costs of licensing the reactor. A purpose of the public meeting is to discuss the revised information concerning the transportation of radioactive materials submitted by TVA on August 1, 2017 (ADAMS Accession No. ML17234A003).

## **Summary of Meeting**

The meeting started with brief introductions and identification of the callers, and an NRC overview of the meeting purpose and how the meeting discussion would be documented.

For discussion Topic 1, NRC staff requested supplemental information relating to the methodology and assumptions used in TRC's (Karpynec 2011) survey of architectural resources at the environmental site audit in May 2017. Although the August 1, 2017, response provided supplemental information relating to the applicant's survey of historic structures, it did not clarify the discrepancy noted between TRC's letter report and a TVA letter to the SHPO dated May 20, 2015.

TRC's letter report (Karpynec 2011) dated August 18, 2011, stated that, "The search revealed no previously recorded architectural resources were located within the APE." The report also stated that TRC's architectural survey (field survey) "resulted in the identification of no previously unrecorded architectural resources." The report goes on to state that, "Based on these results, TRC recommended that no further investigation of aboveground properties in connection to the proposed undertaking."

In a letter dated May 20, 2015, to the Tennessee Historical Commission, the applicant discusses the work performed by TRC in 2011 (Karpynec 2011). At issue, seven structures were identified in the expanded area of potential effect by TVA Cultural Compliance staff based upon review historic maps. The letter states that four of the structures (Numbers 4-7) were recommended ineligible by TRC in 2011.

The NRC staff identified a potential discrepancy between TRC's 2011 letter report (Karpynec 2011), and a TVA letter to the Tennessee Historical Commission dated May 20, 2015. TRC's letter report stated that, "The search revealed no previously recorded architectural resources were located within the APE." The report also stated that TRC's architectural survey (field survey) "resulted in the identification of no previously unrecorded architectural resources." However, TVA's May 2015 letter stated that four of the structures (Numbers 4-7) were recommended ineligible by TRC in 2011. This appears to be a discrepancy because TRC's letter report (Karpynec 2011) made no mention of identification of structures nor did it provide National Register eligibility determinations.

Mr. Steve Cole, archaeologist for TVA, stated that it would have been more accurate to say that TRC recommended that none of the structures were eligible. TVA contracted with TRC to conduct an architectural survey of the original area of potential effect. Because TVA put the project on hold, the applicant did not receive the full detailed survey report. Hence, the letter report provides only a high-level summary. Mr. Cole stated that TRC had Secretary of Interior-qualified professionals perform the survey and that the report should have stated that none of the structures were eligible for listing on the National Register of Historic Places.

The NRC staff identified a potential discrepancy related to information presented in the May 20, 2015, letter to Tennessee Historical Commission and the August 1, 2017 response CR-4 (Part 1). The letter stated that a TVA archaeologist visited two structures (Structures 1 and 3). The August 1, 2017, submittal says they visited three structures (1, 2, and 3).

TVA (Steve Cole) stated that all three structures were visited by the TVA archaeologist. However, the letter to SHPO was written the way it was because one of the structures, Structure 2 (a barn) was no longer extant.

For discussion Topic 2, the NRC staff discussed the revised information concerning the transportation of radioactive materials submitted by TVA on August 1, 2017 (ADAMS Accession No. ML17234A003)

The NRC staff identified to TVA a discrepancy in the number of spent fuel shipments provided on page E8-1 of Enclosure 8 to TVA submittal dated August 1, 2017. TVA states there would be 113 shipments and the NRC staff asked if TVA could check to see if the ratio of the MTU of the shipping to 0.5 MTU per shipments along with the ratio of the electrical generation rate for the reference reactor in WASH-1238 to the electrical generation rate from the PPE Table were performed in setting the value of 113 shipments.

TVA understands the NRC staff's concern and will provide a response to the staff.

The NRC staff asked for clarification from TVA for the release fraction from an accident, namely the use of rail cask release fraction in NUREG-2125 for a truck shipment.

TVA responded that in NUREG-2125 a truck shipping cask was not expect to have a release from credible accidents and they believe that applying the NUREG-2125 rail cask release fraction as being the most up-to-date information available.

The NRC staff asked if TVA could provide information on the code improvements, modification, and/or changes that may have occurred between RADTRAN code Versions 6.0 and 6.5. TVA applied Version 6.5 however the NRC only has access to Version 6.0. The staff has observed a difference between their preliminary results concerning the doses at vehicle stops (such as for refueling during a shipment).

TVA understands the NRC staff's concern and will provide a response to the staff.

The staff identified a potential discrepancy on page E8-13 in the route distance from Clinch River to Yucca Mountain and asked TVA to clarify.

TVA had since identified the same discrepancy and confirmed that the value should be the same as determined by the NRC staff.

The NRC staff asked for clarification for the accident, fatality, and injury rates provided in Table 7.4-1 on page E8-18. First, the staff believes that References 7.4-5 and 7.4-6 on page E8-19 17 are not the references to the information provided in Table 7.4-1, and that SAND2013-8095, Table 3 is the reference for the data in Table 7.4-1. Second, the staff identified several discrepancies in SAND2013-8095, Table 3 and attempted to resolve these discrepancies by examining an earlier Sandia report, SAND2006-6315, Table 2. This examination yielded additional discrepancies between SAND2013-8095, Table 3 and SAND2006-6315, Table 2. The staff also attempted to locate reference BTS 2006, Table 1-23 which is cited as the source of the data in SAND2013-8095, Table 3 but the staff was unsuccessful at locating this reference. The discrepancies between the two Sandia reports as well as the unavailability of reference BTS 2006, Table 1-23 were discussed with TVA.

TVA confirmed that SAND2013-8095, Table 3 is the source of the data in Table 7.4-1 on page E8-18. TVA also understands the NRC staff's concern including the sources for their information is different from what the NRC staff has relied upon in prior new reactor environmental reviews. TVA will provide a response to the staff.

After these discussions, the public was given the opportunity to comment and ask questions. No questions were asked.

**Action Items/Next Steps**

TVA stated that it plans to provide clarifications as listed above.

Docket No.: 52-047

Enclosure:  
List of Participants

**Summary of Meeting between the U.S. Nuclear Regulatory Commission and  
Tennessee Valley Authority to Discuss Clarification of Topics Associated With  
Tennessee Valley Authority's Early Site Permit Application for the  
Clinch River Nuclear Site**

**List of Participants**

<b>Name</b>	<b>Affiliation</b>
Patricia Vokoun	NRC
Jennifer Davis	NRC
Don Palmrose	NRC
Allen Fetter	NRC
Steve Maheras	PNNL (NRC contractor)
Ray Schiele	TVA
Kelvin Montague	TVA
John Thomas	TVA
Stephen Cole	TVA
Kevin Casey	TVA
Shuler, Marianne	TVA
Jeff Perry	TVA
Alex Young	TVA
Erica Grace	AECOM (TVA contractor)
Han Kwon Choi	AECOM (TVA contractor)
Bobbie Hurley	AECOM (TVA contractor)
Kevin Taylor	AECOM (TVA contractor)
Sean Hartmen	
Gregory Richardson*	Engineering Planning and Management (EPM), Inc.

\*Public Participant(s)

Contact: Patricia Vokoun, Project Manager, 301-415-3470

ADAMS Accession No: ML17352A028