

February 13, 2017

Jonathan Hoyes, Director
Technological Hazards Division
Federal Emergency Management Agency (Area 8)
400 C Street, SW
Washington, DC 20024

SUBJECT: REQUEST FOR FEDERAL EMERGENCY MANAGEMENT AGENCY
REVIEW OF AN EARLY SITE PERMIT APPLICATION FOR THE
TENNESSEE VALLEY AUTHORITY CLINCH RIVER NUCLEAR SITE

Dear Mr. Hoyes:

By letter dated May 12, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16139A752) (Enclosure 1), the Tennessee Valley Authority (TVA) submitted an Early Site Permit (ESP) application (Revision 0) to the Nuclear Regulatory Commission (NRC) for the Clinch River Nuclear (CRN) Site in Oak Ridge, Tennessee. The ESP application requests approval of the CRN Site to support the future construction of two or more small modular reactors (SMRs). Although a reactor design is not specified, TVA has identified bounding parameters for a surrogate nuclear plant, which NRC will use to evaluate the suitability of the site for the building and operation of SMRs falling within those parameters.

In Part 5 (Emergency Plan) of the ESP application (ADAMS Accession No. ML16144A150) (Enclosure 2), TVA submitted two distinct onsite emergency plans for approval, which propose “major features” of the emergency plan¹ for the CRN Site, pursuant to 10 CFR 52.17(b)(2)(i). Both plans are based on the existing TVA Generic Emergency Plan. Part 5A, “Emergency Plan (Site Boundary EPZ),” contains the major features of an emergency plan for a plume exposure pathway emergency planning zone (EPZ) at the Site Boundary. Part 5B, “Emergency Plan (2-Mile EPZ),” contains the major features of an emergency plan for a plume exposure pathway EPZ consisting of an area approximately two miles in radius. At the combined license (COL) or construction permit (CP) stage, the Emergency Plan (5A or 5B) for the site will be based upon the selected SMR design’s ability to meet the criteria in the applicable plan.

The ESP application does not include the offsite emergency plans, as it is limited to the proposed major features of the onsite emergency plan – including the identification of the exact size and configuration of the 2-mile EPZ for the Part B Emergency Plan – as allowed by 10 CFR 52.17(b)(2)(i). When a COL (or CP) application is submitted that references the CRN Site ESP, the choice of Emergency Plan 5A or 5B will dictate the scope of FEMA’s subsequent review of the offsite plans in support of the selected SMR design.

¹ As defined in 10 CFR 52.1, major feature of the emergency plans means an aspect of those plans necessary to (i) address in whole or part one or more of the 16 standards in 10 CFR 50.47(b); or (ii) describe the emergency planning zones as required in 10 CFR 50.33(g).

An Evacuation Time Estimate (ETE) Report (Revision 0, September 2015) (Enclosure 3) for the CRN Site (ADAMS Accession No. ML16166A054), provides an analysis of the evacuation times associated with the 2-mile EPZ. The ETE Report was provided to support the NRC staff's determination that there is no significant impediment to the development of an emergency plan at the CRN Site that cannot be mitigated or eliminated, pursuant to 10 CFR 52.18. TVA is addressing both the reduction and elimination of the offsite EPZ – and related impacts to the onsite emergency plan – through NRC's licensing exemption process.

We are providing Federal Emergency Management Agency (FEMA) with an enclosed copy of the application materials associated with emergency planning for use in reviewing the offsite-related information. The scope of FEMA's review for this ESP application is governed by the NRC regulations in 10 CFR 52.17(b)(1), (b)(2)(i) and (b)(4); 10 CFR 52.18; 10 CFR 50.47(a)(i)(iv) and (a)(2); and Appendix E of 10 CFR Part 50. In addition, the December 7, 2015, Memorandum of Understanding (MOU) between FEMA and NRC (ADAMS Accession No. ML15344A371), addresses FEMA's responsibilities in determining the adequacy of offsite emergency plans and preparedness at the ESP phase.

Since the ESP application only includes proposed major features of the onsite emergency plan, and does not include any offsite emergency plans, the requested FEMA deliverable (to the NRC) associated with its review of the application is limited to a determination regarding (1) whether there is a significant impediment to the development of offsite emergency plans for the 2-mile plume exposure pathway EPZ (for Emergency Plan 5B) (see 10 CFR 52.17(b)(1) and 10 CFR 52.18); and (2) whether the proposed major features of the emergency plan, specifically related to the exact size and configuration of the 2-mile plume exposure pathway EPZ, is acceptable (for Emergency Plan 5B) (see 10 CFR 52.17(b)(2)(i) and 10 CFR 52.18). With regard to providing a description of contacts and arrangements made with Federal, State, and local government agencies (see 10 CFR 52.17(b)(4)), TVA identified three letters in Section 13.3, "Emergency Preparedness," of Part 2 of the application from Tennessee Emergency Management Agency, Anderson County, and Roane County.

In support of the NRC's overall review schedule for the CRN Site ESP application, we are requesting a due date of May 12, 2017, for NRC to receive from FEMA any initial findings, questions, requests for additional information, and issues FEMA may identify that may impact its findings. If you are unable to meet this date, please inform us of the reason for any needed extensions, as well as the new submittal date(s), by February 27, 2015.

Any questions pertaining to the TVA CRN Site ESP application review may be directed to either me at (301) 287-3779, or Joseph Anderson at (301) 287-9300.

Sincerely,

/RA/

Stephanie M. Coffin, Acting Director
Division of Preparedness and Response
Office of Nuclear Security and Incident Response

Enclosures:

1. TVA Letter No. CNL-16-081
 2. TVA CRN Site ESP Application, Part 5,
Emergency Plan
 3. TVA Letter No. CNL-16-104, ETE Report
- cc: T. Greten (FEMA HQ) (w/o enclosures)
V. Quinn (FEMA HQ) (w/o enclosures)
J. King (FEMA HQ) (w/o enclosures)

Enclosaures:

1. TVA Letter No. CNL-16-081
 2. TVA CRN Site ESP Application, Part 5,
Emergency Plan
 3. TVA Letter No. CNL-16-104, ETE Report
- cc: T. Greten (FEMA HQ) (w/o enclosures)
V. Quinn (FEMA HQ) (w/ enclosures)
J. King (FEMA HQ) (w/ enclosures)

Distribution: S. Coffin, NSIR B. Pham, NSIR J. Anderson, NSIR D. Barss, NSIR B. Musico, NSIR

ADAMS Accession Number: ML17040A318

OFFICE	NSIR/DPR/RLB	NSIR/DPR/RLB:TL	NSIR/DPR/RLB:BC	NSIR/DPR:D
NAME	BMusico	DBarss (jda for)	JAnderson	SCoffin
DATE	02/10/17	02/10/17	02/13/17	02/13/17

OFFICIAL RECORD COPY