



FEMA

August 11, 2017

Stephanie Coffin
Acting Director, Division of Preparedness and Response
Office of Nuclear Security and Incident Response
U.S. Nuclear Regulatory Commission
Mail Stop T4D22A
Washington, D.C. 20555

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

Dear Ms. Coffin:

This letter provides additional information related to our June 12, 2017 letter to the NRC regarding the Early Site Permit Application (ESPA) submitted by the Tennessee Valley Authority (TVA) for the Clinch River Nuclear Site in Oak Ridge, Tennessee. This letter follows several discussions between FEMA and NRC headquarters and regional staff on this application.

Since 2006, FEMA has reviewed and provided feedback to the NRC on several ESPA packages. All of these previous ESPAs involved adding additional reactors to existing sites which already had approved emergency plans, including 10-mile emergency planning zone (EPZ) and 50-mile ingestion pathway zone (IPZ)s. The Clinch River Nuclear Site ESPA is offered under substantially different circumstances, and with different provisions, than these previous ESPAs. Differences include:

- Proposed 2-mile EPZ: FEMA understands TVA requested exemptions from certain standards in 10 CFR § 50.47(b) regarding onsite and offsite emergency response plans for nuclear power reactors; from certain requirements of 10 CFR § 50.33(g) and 10 CFR § 50.47(c)(2) to establish plume exposure pathway (PEP) and ingestion exposure pathway EPZs for nuclear power plants; and from certain requirements of 10 CFR Part 50, Appendix E, which establish the elements that make up the content of emergency plans. The NRC has not yet granted these exemptions. Most notably, these exemptions include a 2-mile EPZ, and as yet to be determined IPZ. This is substantially different than the 10-mile EPZ and 50-mile IPZ featured other recent ESPAs.
- The lack of Ingestion Pathway Zone information: The Clinch River Nuclear Site ESPA deferred providing information on the planned IPZ to later submittals. Notably, TVA was not required to provide this information in the ESPA. However, based on the proposed 2-mile EPZ, TVA is obviously considering a different emergency preparedness planning from

the standard 10-mile EPZ and 50-mile IPZ. Absent IPZ information, it is difficult to understand the complete emergency planning construct supporting the proposed 2-mile EPZ.

- State and Local stakeholders concerns: Based on FEMA's recent discussions with the Tennessee Emergency Management Agency (TEMA), the State and local stakeholders lack clarity on what the complete proposed emergency management construct will be at the CRN Site. While many pieces are not required until the combined operating license application (COLA) phase, evaluating the Clinch River Nuclear Site ESPA absent the understanding of NUREG-0654 requirements and how the 10-mile EPZ and 50-mile IPZ will be in place or modified make evaluating the current proposal difficult for TEMA and other State and local stakeholders.

Since the submittal of our June 12, 2017 letter to the NRC, we understand that the NRC received responses to RAI-1-8761 (ADAMS Accession No. ML17166A455), where TVA provided to NRC copies of letters from TEMA, Anderson County, Roane County, and the City of Oak Ridge. In addition, TVA provided a copy of the exiting letter of agreement with the DOE REAC/TS in Oak Ridge, TN. Based on discussions with the NRC, FEMA understands that TVA has held several productive discussions with these organizations and has received broad support from them, as indicated in the letters posted to ADAMS.

However, based on recent discussions with TEMA, FEMA also notes many of these letters were submitted in 2015, and may not necessarily reflect ORO concerns with the current Clinch River Nuclear Site ESPA proposal.

- Lack of certainty on the design: The Clinch River Nuclear Site ESPA does not clearly identify certain basic information, such as what reactor type, number of reactors per site, source terms, and what the risks are. Answers to such issues have not been determined, are unclear in the proposal, or have been deferred to the COLA phase and the NRC exemption process. Based on FEMA and NRC staff-to-staff discussions, we understand NRC has sent TVA a Request for Information (RAI) pertaining this issue. We look forward to seeing the response to this RAI with more details.

Your February 13, 2017 letter requested to know if FEMA identified any significant impediments to the development of offsite emergency response plans for the Clinch River Nuclear Site, presuming a 2-mile plume exposure pathway EPZ (for Emergency Plan 5B). FEMA, working with TEMA, has not identified physical characteristics of the proposed site that could pose a significant impediment to the development of emergency plans, including evacuation if needed from the 2-mile EPZ.

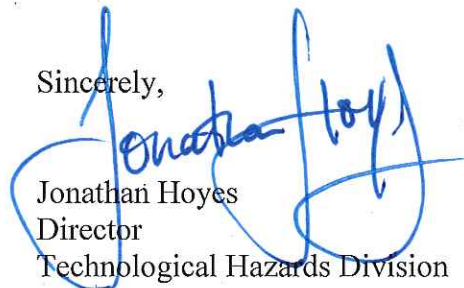
As noted in FEMA's June 12, 2017 letter, and for the reasons listed in that letter and expanded upon in this letter, FEMA cannot support any determination that a 2-mile EPZ is adequate for the Clinch River Nuclear Site at this time. Without the NRC's complete accident analysis and the resulting projected radiological releases offsite, compared against the current Environmental Protection Agency Protective Action Guides, it is premature for FEMA to determine the adequacy of a 2-mile EPZ. Therefore, FEMA cannot make a determination whether the proposed major features of the emergency plan (Emergency Plan 5B), specifically related to the exact size and configuration of the 2-mile plume exposure pathway emergency planning zone, is acceptable.

Please note that FEMA's analysis of this Clinch River Nuclear Site ESPA only focused upon the assumptions involving the Part 5B, "Emergency Plan (2 mile Emergency Planning Zone (EPZ))." 2-mile Emergency Planning Zone as requested in your February 13, 2017 letter. FEMA notes the TVA application also contained a scenario and set of assumptions involving a 0-mile (site boundary) EPZ. FEMA did not review or analyze the feasibility of this portion of the application at this time. If requested by the NRC in the future, FEMA would review the 0-mile portions of the application and provide comments and recommendations. For example, we believe that nothing in existing NRC regulations or the December 7, 2015, "Memorandum of Understanding (MOU) between the Department of Homeland Security / Federal Emergency Management Agency and Nuclear Regulatory Commission Regarding Radiological Response, Planning and Preparedness" would preclude the NRC from requesting FEMA to provide the NRC with findings concerning appropriate offsite radiological emergency preparedness considerations, including the offsite preparedness capabilities contracted, through letters of agreement, for firefighting, law enforcement, and ambulance/medical response services are part of the licensee's onsite emergency preparedness. FEMA stands ready, consistent with the MOU, to work with NRC in this regard and to ensure that appropriate licensee funds are provided to FEMA to accomplish this effort.

Many important offsite emergency preparedness gaps identified in our June 12, 2017 letter and discussed above are still unresolved and need further discussion on how they will be resolved. FEMA recommends that FEMA and NRC meet with TVA, TEMA, and other critical stakeholders in the near future to discuss the accident basis as well as the offsite planning and preparedness capabilities to ensure the public living in the vicinity of the Clinch River Nuclear Site will be adequately protected. We also understand that the organizations plan to actively participate in all emergency planning and radiological emergency preparedness exercises and evaluations with TVA. These discussions will result in contemporary, coordinated and informed decision about the appropriate size of the EPZ and IPZ, as well as the necessary levels of planning and preparedness for the communities surrounding the Clinch River Nuclear Site.

Please do not hesitate to contact me directly at 202.212.2376 if you have any questions or desire further clarification on any of these areas of concern.

Sincerely,



Jonathan Hoyes
Director
Technological Hazards Division