



**FEMA**

June 12, 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:

The United States Nuclear Regulatory Commission (NRC) in its letter dated February 13, 2017, advised that the Tennessee Valley Authority (TVA) submitted an Early Site Permit (ESP) application (revision 0) to the NRC for the Clinch River Nuclear (CRN) Site in Oak Ridge, Tennessee. As requested by the NRC, Federal Emergency Management Agency (FEMA) Headquarters and FEMA Region IV reviewed the ESP application for the TVA CRN Site, specific to Part 5B, "Emergency Plan (2 mile Emergency Planning Zone (EPZ)". Specifically, FEMA was requested to provide the NRC a determination regarding the following items:

1. Whether there is significant impediment to the development of offsite emergency plans for the 2-mile plume exposure pathway EPZ (for Emergency Plan 5B) (see 10 C.F.R. §52.17(b)(1) and 10 C.F.R. §52.18).
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 emergency planning zone, is acceptable (for Emergency Plan 5B) (see 10 C.F.R. §52.17(b)(2)(i) and 10 C.F.R. §52.18).
3. Whether there is sufficient description of contacts and arrangements made with Federal, State, and local government agencies (see 10 C.F.R. §52.17(b)(4)).

The following are initial concerns FEMA has identified after reviewing the CRN Site ESP application:

1. Specific offsite-related emergency preparedness exemptions from 10 C.F.R. Part 50 that will be or are being considered need to be identified.
2. Emergency Plan 5B does not identify or describe the Alert and Notification System in sufficient detail to identify a possible impediment.
3. Emergency Plan 5B does not identify the possible impediment of simultaneous evacuation of Oak Ridge National Laboratory or Y-12 to the south in the direction of CRN as required in 10 C.F.R. §52.17(b)(1).

4. Emergency Plan 5B does not identify the ingestion pathway zone (see 10 C.F.R. §50.47) as required in 10 C.F.R. §52.17(b)(2)(i). A vital component of FEMA's Radiological Emergency Preparedness (REP) Program mission to ensure that state and local capabilities exist to adequately protect agricultural, livestock and environmental resources within the Ingestion Pathway Zone (IPZ). In order for the REP Program to adequately support the communities surrounding the CRN Site utilizing the National Preparedness System (NPS) doctrine and the Threat Hazard Identification and Risk Assessment process, FEMA needs to initially understand what areas will encompass the CRN IPZ.
5. As written, FEMA questions whether there is sufficient detail in Emergency Plan 5B to determine the contacts and agreements made with Federal, State, and local government agencies as required in 10 C.F.R. §52.17(4).

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 Emergency Plan 5B, specifically related to the exact size and configuration of the 2-mile plume EPZ, is acceptable. With the currently provided information, FEMA will not support an exemption to the 10 and 50 mile EPZs as defined in 44 C.F.R. §350.7(b) and 10 C.F.R. §50.47(c)(2). FEMA and the NRC should meet with TVA and the State of Tennessee 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 CRN SMR will be adequately protected. These discussions will result in a coordinated and informed decision about the appropriate size of the plume and ingestion pathway EPZs.

Also, in Part 2 of the early site permit application Section 13.3, "Emergency Preparedness," TVA identified three letters from the Tennessee Emergency Management Agency, Anderson County, and Roane County. FEMA has not been provided with these letters, therefore, FEMA cannot sufficiently determine if there are the required contacts and agreements being made with Federal, state, and local government agencies.

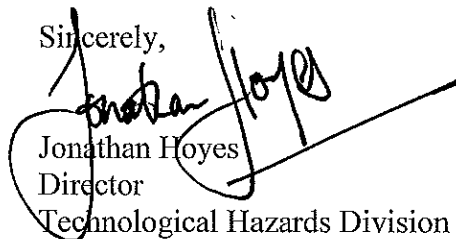
Therefore, based on our thorough review of the CRN Site ESP Application Part 5B, Evacuation Time Estimate Report, Revision 0, September 2015, and the assumptions made therein, FEMA identified significant impediments to the development of offsite emergency response plans. The current Tennessee Multijurisdictional Radiological Emergency Response Plan and associated local implementing procedures for the Sequoyah and Watts Bar Nuclear Plants serve as an example of the state and local capability to develop offsite radiological emergency response plans. Roane County (where the CRN SMR will be located) currently serves as a host county for the Watts Bar Nuclear Plant 10-mile emergency planning zone. While they currently have adequate plans and procedures for the Core Capabilities of Mass Care and Public Health, Health Care, and Emergency Medical Services as demonstrated during the Watts Bar Nuclear Plant Radiological Emergency Preparedness Program biennial exercise as a host county on November 18, 2015, this still does not address our initial concerns identified above.

Please note that FEMA's analysis of this CRN ESP 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.

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,

A handwritten signature in black ink, appearing to read "Jonathan Hoyes", is written over the printed name and title. The signature is stylized and includes a long horizontal stroke extending to the right.

Jonathan Hoyes  
Director  
Technological Hazards Division