



FEMA

July 8, 2019

Office of the Secretary  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

SUBJECT: FEMA Comments on the Clinch River Nuclear Site (CRNS) Early Site Permit Application (ESPA) Pursuant to Federal Register Notice of the ESPA Hearing, Docket Nos. 52-047; NRC-2016-0119

Dear Office of the Secretary:

The purpose of this memorandum is to forward the Federal Emergency Management Agency's (FEMA) comments in response to the Federal Register Notice of the Hearing for the Clinch River Nuclear Site (CRNS) Early Site Permit (ESPA). In February 2017, the Nuclear Regulatory Commission (NRC) requested FEMA review the CRNS ESPA and determine: a) whether there is a significant impediment to the development of off-site emergency plans for the 2-mile EPZ 10 C.F.R. §52.17(b)(1) and 10 C.F.R. §52.18; b) whether the proposed major features of the emergency plan, specifically related to the exact size and configuration of the 2-mile EPZ, is acceptable 10 C.F.R. §52.17(b)(2)(i) and 10 C.F.R. §52.18; and c) whether there is sufficient descriptions of contacts and arrangements made with federal, state, and local government agencies 10 C.F.R. §52.17(b); c)

As noted in FEMA's previous CRNS ESPA memoranda submissions and requests for clarification dated 12 June 2017, 11 August 2017, and 24 January 2018, FEMA in collaboration and coordination with the Tennessee Emergency Management Agency (TEMA), determined that the boundary established for the proposed 2-mile Plume Exposure Pathway (PEP) EPZ (as reflected in Emergency Plan 5B and its ETE Report) was established relative to local emergency response needs and capabilities, as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries. This determination is limited in scope and only addresses the required requests from the NRC for input.

As the CRNS licensing process progresses towards the selection of a specific Small Modular Reactor (SMR) design for a combined license (COL) and the NRC moves toward publication of the draft regulation for public comment entitled *Emergency Preparedness for Small Modular Reactors and Other New Technologies (SMR/ONT)*, FEMA looks forward to providing continued consultative support to the NRC consistent with each Agency's statutes, applicable regulations, and the joint FEMA-NRC Memorandum of Understanding.

Going forward it is important to outline the boundaries of FEMA's concerns. Regarding the emergency planning (EP) framework in support of the employment of SMR/ONT, FEMA does not currently endorse the establishment of a Site-Boundary PEP EPZ or a 2-mile PEP EPZ for any SMR/ONT absent the integration of the full spectrum of threats (Insider Threat, Cyber, Nation-State National Security Emergency, Electromagnetic Pulse, etc.) and their associated impacts into the Accident Analyses and the Probabilistic Risk Analysis (PRA). The full threat spectrum must be

integrated into the risk assessment to provide a comprehensive view of EP requirements. Moreover, because of the “uniqueness” of radiological emergency preparedness (EP), we believe that State, Local, Tribal and Territorial (SLTT) stakeholders must play a central role in managing and mitigating the risk by determining the appropriate offsite radiological EP requirements. Offsite Radiological EP is not sufficiently addressed within the All Hazard’s framework – radiological EP is unique. In a Worst-Case Scenario, our OROs could be challenged to effectively protect the health and safety of the public using an Ad Hoc EP construct.

FEMA remains concerned with the use of the Protection Action Guide (PAG) for evacuation as the principal threshold to determine if a formal offsite EP program or an EPZ is needed. According to the January 2017 EPA PAG Manual, EPA-400/R-17/001, this is an inappropriate application of the EPA PAG as a PAG is defined as the projected dose to an individual from a release of radioactive material at which a specific protective action to reduce or avoid that dose is recommended. (See January 2017 PAG Manual p. 12). PAGs do not establish an acceptable level of risk for normal, non-emergency conditions, nor do they represent the boundary between safe and unsafe conditions. (see January 2017 PAG Manual p. 12). Advanced planning – such as provided by an EPZ - reduces the complexity of the decision-making process during an incident. (See January 2017 PAG Manual p. 58).

From staff discussions, it appears the NRC may be assuming a massive, immediate coordinated federal response should the need arise for offsite response. FEMA remains concerned that relying on such a massive and immediate federal response to a radiological accident/incident would be problematic in the event of multiple catastrophic disasters or a broader nation-state/national security emergency. During this pre-decisional phase, we wish to stress that the proven best way to ensure offsite readiness is to develop, exercise, and assess ORO radiological capabilities, as is now done throughout the offsite EPZ.

FEMA will provide additional comments on the proposed SMR/ONT rule under a separate correspondence to the NRC. As SMRs/ONTs are developed, licensed, and operationalized, FEMA will continue to support a risk-informed approach that encompasses and integrates the full spectrum of threats to emergency preparedness to account for the unique nature of radiological incidents and associated emergency preparedness requirements. We remain fully committed to engaging and collaborating closely with states, locals, tribal, federal partners and the industry as the CRNS licensing process and the rulemaking continue.

Should you have any questions about this response, please contact Bruce C. Foreman, Policy and Doctrine Branch Chief, at 202-646-3567.

Sincerely,

**MICHAEL S  
CASEY**

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Date: 2019.07.08 10:26:49  
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Michael S. Casey, Ph.D.  
Director  
Technological Hazards Division

**From:** [Foreman, Bruce](#)  
**To:** [Docket, Hearing](#); [Anderson, Joseph](#)  
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**Subject:** [External\_Sender] Docket Nos. 52-047; NRC-2016-0119: FEMA Comments on the Clinch River Nuclear Site ESPA Pursuant to the Notice of the Hearing on 14 August 19  
**Date:** Monday, July 08, 2019 12:39:40 PM  
**Attachments:** [FEMA Comments on the Clinch River Nuclear Site Early Site Permit Signed.pdf](#)  
**Importance:** High

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Good Afternoon,

- Pursuant to Federal Register Notice Docket Nos. 52-047; NRC-2016-0119, Tennessee Valley Authority; Clinch River Nuclear Site, ESPA Notice of the Hearing on 14 August 2019, the Federal Emergency Management Agency's (FEMA's) CRNS ESPA comments for the record are attached (pdf entitled *FEMA Comments on the Clinch River Nuclear Site Early Site Permit*). Please ensure comments are made a part of the record.
- Request your acknowledgement of receipt of comments and confirmation when comments are uploaded into the Electronic Information Exchange (EIE) and included as part of the record.

- Thanks.

Respectfully,

Bruce

Bruce C. Foreman

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Resilience

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Resilience: ***“The ability to prepare for anticipated hazards, adapt to changing conditions, and withstand and recover rapidly from disruption.”***

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