ClinchRiverESPHFNPEm Resource

From: Edmondson, Carla <cedmondson@tva.gov>
Sent: Tuesday, August 08, 2017 11:14 AM
To: Fetter, Allen
Subject: [External_Sender] CNL-17-102 CRn Supplemental TEMA Information
Attachments: CNL-17-102 CRN Supplmental Info TEMA Letters.pdf

I meant to include the ML 17220A139. Transmitted today.

Carla
423-751-2638

From: Edmondson, Carla
Sent: Tuesday, August 08, 2017 11:12 AM
To: Fetter, Allen
Subject: CNL-17-102 CRn Supplemental TEMA Information

Attached for your convenience. A hard copy will follow via UPS.

Carla Edmondson
Executive Management Assistant to Joe Shea
Vice President of Nuclear Regulatory Affairs & Support Services
Tennessee Valley Authority
423-751-2638

Hearing Identifier: ClinchRiver_ESP_HF_NonPublic
Email Number: 423

Mail Envelope Properties (7D5D7C9A93A2F1418E8AF559D2DAFAF099B1A3F7)

Subject: [External_Sender] CNL-17-102 CRn Supplemental TEMA Information
Sent Date: 8/8/2017 11:13:55 AM
Received Date: 8/8/2017 11:15:53 AM
From: Edmondson, Carla

Created By: cedmondson@tva.gov

Recipients:
"Fetter, Allen" <Allen.Fetter@nrc.gov>
Tracking Status: None

Post Office: TVACHAXCH2.main.tva.gov

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CNL-17-102 CRN Supplmental Info TEMA Letters.pdf	2508554	

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Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

Tennessee Valley Authority, 1101 Market Street, Chattanooga, TN 37402

CNL-17-102

August 8, 2017

10 CFR 52.17, Subpart A

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Clinch River Nuclear Site
NRC Docket No. 52-047

Subject: Submittal of Supplemental Information Related to Emergency Planning Correspondence Between Tennessee Emergency Management Agency and Tennessee Valley Authority in Support of Early Site Permit Application for Clinch River Nuclear Site

Reference: Letter from TVA to NRC, CNL-16-081, "Application for Early Site Permit for Clinch River Nuclear Site," dated May 12, 2016

By letter dated May 12, 2016 (Reference 1), Tennessee Valley Authority (TVA) submitted an application for an early site permit for the Clinch River Nuclear (CRN) Site in Oak Ridge, TN. During a telephone call on July 18, 2017, the Nuclear Regulatory Commission requested supplemental information related to correspondence between the Tennessee Emergency Management Agency and TVA concerning emergency planning at the CRN Site. The enclosure to this letter provides the requested supplemental information and supporting documentation.

There are no new regulatory commitments associated with this submittal. If any additional information is needed, please contact Dan Stout at (423) 751-7642.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 8th day of August 2017.

Respectfully,

J. W. Shea
Vice President, Nuclear Regulatory Affairs & Support Services

Enclosure

cc: See Page 2

Enclosure

Supplemental Information Related to Emergency Planning Correspondence Between TEMA and TVA

cc (w/ Enclosure):

A. Fetter, Project Manager, Division of New Reactor Licensing, USNRC

cc (w/o Enclosure):

V. McCree, Executive Director of Operations, USNRC
C. Haney, Regional Administrator, Region II, USNRC
M. Johnson, Deputy Executive Director for Reactor and Preparedness Programs, USNRC
V. Ordaz, Acting Director, Office of New Reactors, USNRC
F. Akstulewicz, Director, Division of New Reactor Licensing, USNRC
J. Colaccino, Branch Chief, Division of New Reactor Licensing, USNRC
M. Sutton, Project Manager, Division of New Reactor Licensing, USNRC
P. Vokoun, Project Manager, Division of New Reactor Licensing, USNRC
T. Dozier, Project Manager, Division of New Reactor Licensing, USNRC
M. M. McIntosh, Regulatory Specialist, Eastern Regulatory Field Office, Nashville District, USACE

ATTACHMENT

TVA-TEMA Correspondence Letters

Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402

February 12, 2015

Mr. Tim Holden
Planning Manager
Plans, Mitigation, and Exercise Division
Tennessee Emergency Management Agency
3041 Sidco Dr.
Nashville, Tennessee 37402-1502

Dear Mr. Holden:

We appreciated the opportunity to meet with you, DOE, and key stakeholders on January 27th at the Joint Information Center. As we discussed, TVA is evaluating the suitability of the Clinch River site for potential construction and operation of small modular reactors (SMRs). As part of its early site permit application (ESPA) to the Nuclear Regulatory Commission (NRC), TVA is proposing an emergency planning zone (EPZ) that takes into account the enhanced safety features of SMRs. In its ESPA, TVA is proposing both a 2-mile EPZ and a site-boundary EPZ, with a decision taken through a future licensing action based upon the reactor selected and specific accident scenarios and consequences associated with that design. Although the schedule does not anticipate operation of SMRs before the mid-2020's, the ESPA will soon require detailed plans and calculations for the NRC evaluation.

Enclosed are maps and a description of the potential 2-mile "geographic boundary" EPZ. We understand that TEMA will coordinate with Roane County, the City of Oak Ridge and other appropriate stakeholders as needed to evaluate and provide feedback on the proposed 2-mile EPZ. Once a 2-mile EPZ boundary is agreed upon, TVA will complete its evacuation time estimates and finish drafting its emergency plans for the ESPA.

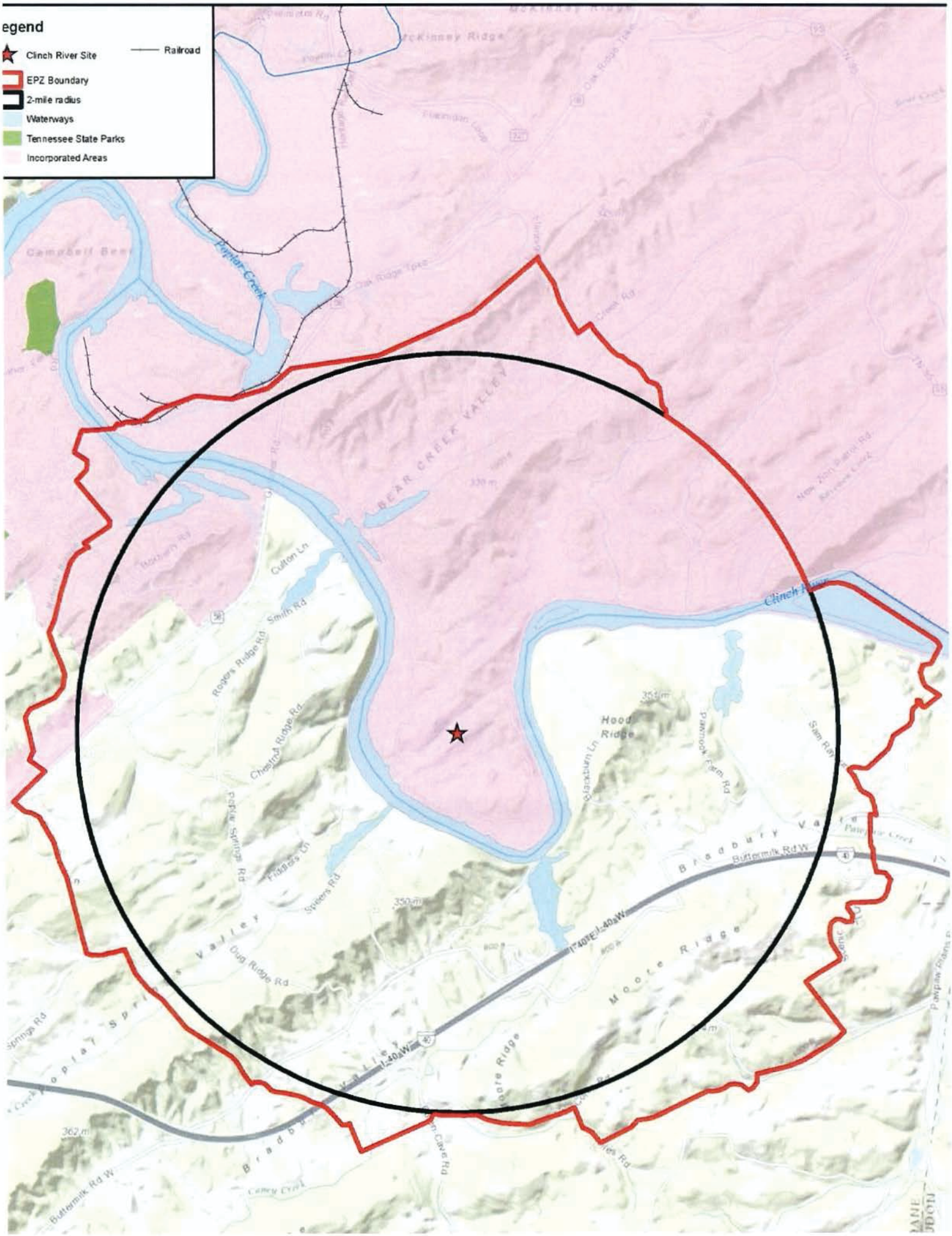
We look forward to continued dialogue in the coming years as we work together toward a shared goal of public protection. We understand and appreciate that DOE has been in the Oak Ridge area for decades and that there is a long history of cooperation on emergency preparedness issues. We look forward to working closely with TEMA, DOE, and local agencies to craft and implement efficient and effective emergency plans that recognize this history, meet or exceed requirements and, most importantly, protect public health and safety.

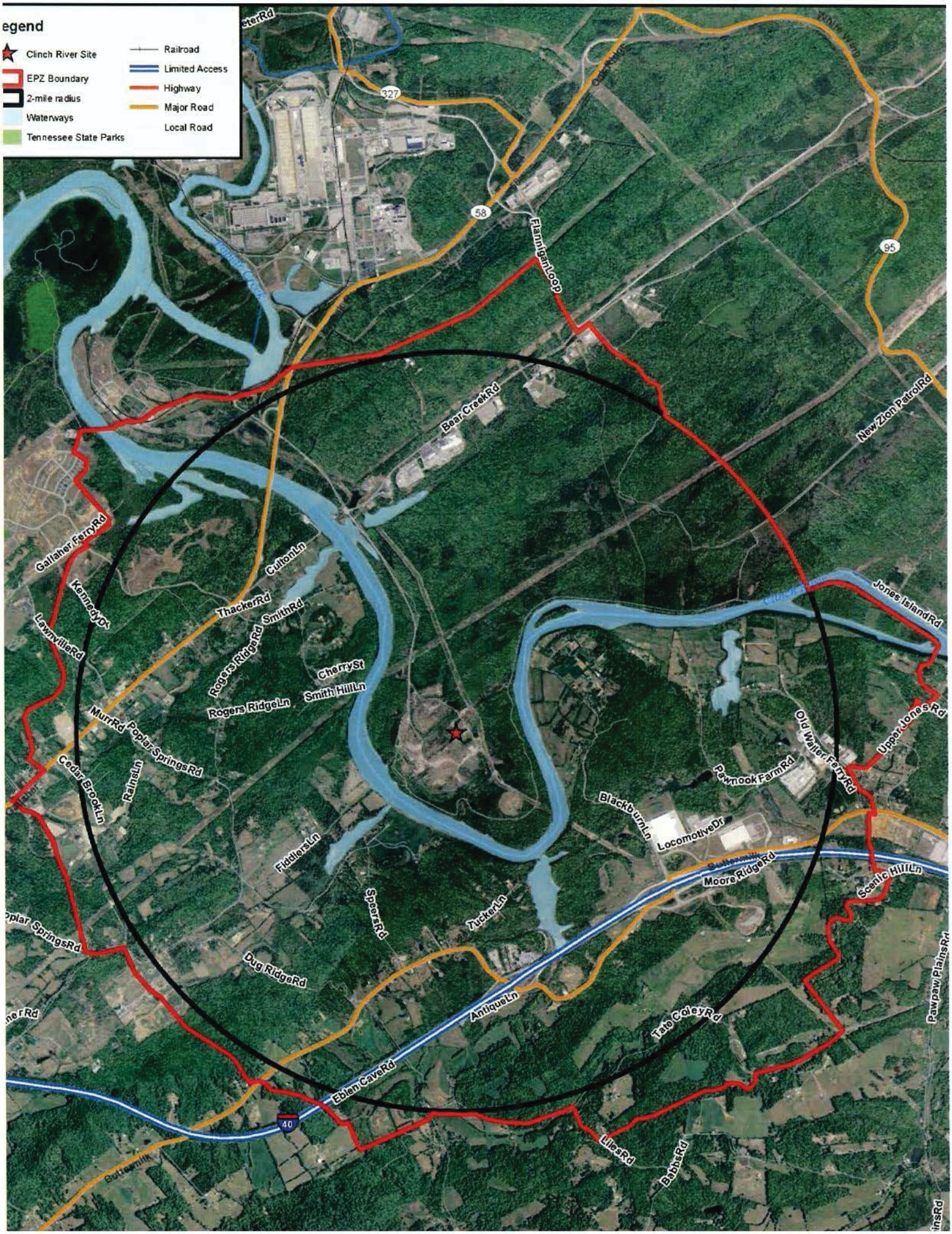
Please let us know how we can help in moving toward consensus on the 2-mile EPZ boundaries. We look forward to hearing from you.

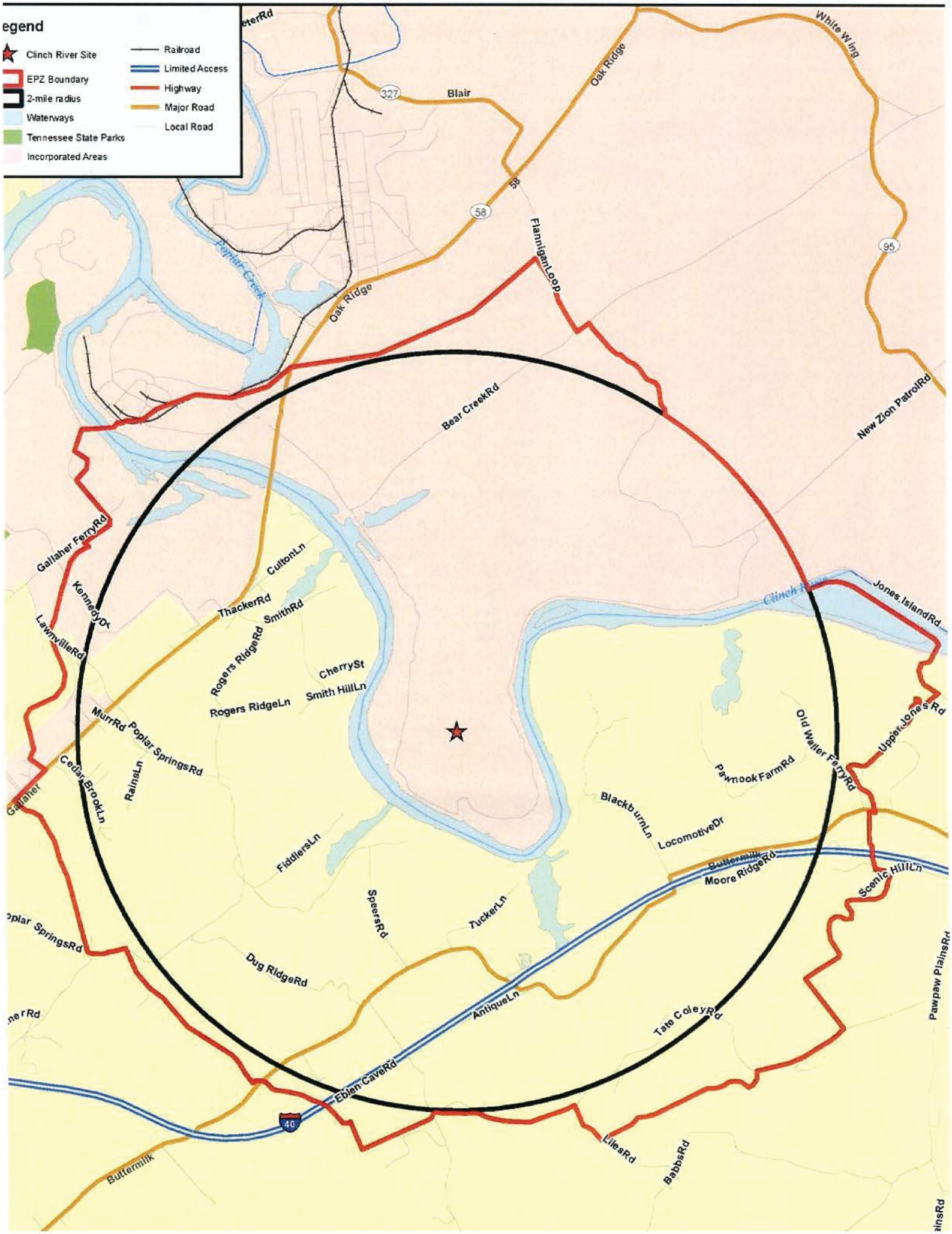
Kind Regards,

Daniel P. Stout
Senior Manager, Small Modular Reactors
Tennessee Valley Authority

DPS:SPS
Enclosures
cc (Enclosures):
W. H. Lee, LP 6B-C


egend
Clinch River Site
Railroad
EPZ Boundary
2-mile radius
Waterways
Tennessee State Parks
Incorporated Areas
McKinney Ridge
Campbell Bend
Poplar Creek
Oak Ridge Tpke
BEAR CREEK VALLEY
Clinch River
Culton Ln
Smith Rd
Rogers Ridge Rd
Chestnut Ridge Rd
Poplar Springs Rd
Fiddlers Ln
Speers Rd
Hood Ridge
Blackburn Ln
Pawnook Farm Rd
Sam Ray
Bradbury Valley
Buttermilk Rd W
I-40 E
I-40 W
Moore Ridge
Dug Ridge Rd
Poplar Springs Valley
Cave Rd
Cancy Creek
Buttermilk Rd W


egend
Clinch River Site
EPZ Boundary
2-mile radius
Waterways
Tennessee State Parks
Railroad
Limited Access
Highway
Major Road
Local Road
327
58
95
Flanigan Loop
Bear Creek Rd
New Zion Patrol Rd
Gallaher Ferry Rd
Kennedy Dr
Laymville Rd
Custom Ln
Thacker Rd
Smith Rd
Rogers Ridge Rd
Cherry St
Smith Hill Ln
Rogers Ridge Ln
Jones Island Rd
Upper Jones Rd
Old Waller Ferry Rd
Murr Rd
Poplar Springs Rd
Cedar Brook Ln
Rains Ln
Pawnook Farm Rd
Blackburn Ln
Locomotive Dr
Fiddlers Ln
Moore Ridge Rd
Scenic Hill Ln
Spears Rd
Tucker Ln
Dug Ridge Rd
Antique Ln
Tate Coley Rd
Pawpaw Plains Rd
Eblen Cave Rd
40
Liles Rd
Babbs Rd


Legend
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Jones Island Rd
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Gallaher
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Dug Ridge Rd
Antique Ln
Tate Coley Rd
Pawpaw Plains Rd
Eblen Cave Rd
Liles Rd
Babbs Rd
Buttermilk
58
327
95
40

Description of the Clinch River 2-Mile EPZ

Beginning at the intersection of Highway (Hwy) 58 and an electrical distribution transmission corridor near the 11:00 position, just beyond 2 miles from the Clinch River centerpoint...

The proposed 2-mile EPZ boundary runs east and northeast along the transmission corridor to its intersection with Flanigan Loop.

The proposed EPZ runs southeast along Flanigan Loop to Bear Creek Road.

The proposed EPZ runs approximately 400 feet northeast along Bear Creek Road to New Zion Patrol Road, then southeast along New Zion Patrol Road to its intersection with the 2-mile radius. At this point the proposed 2-mile EPZ runs along the 2-mile radius for approximately 1.25 miles to the Clinch River crossing to Jones Island.

The proposed 2-mile EPZ then runs east along the north shore of Jones Island to encompass the entire island.

At the eastern extent of the island, the proposed 2-mile EPZ crosses the Clinch River and joins with Upper Jones Road. The proposed EPZ runs southeast along Upper Jones Road for approximately 1,000 feet then making a 90 degree turn to the southwest to continue to run along Upper Jones Road.

The proposed 2-mile EPZ runs southwest along Upper Jones Road until it intersects with Sam Rayburn Parkway where it turns south and runs along Sam Rayburn Pkwy to Buttermilk Rd. W.

At this point, the proposed 2-mile EPZ runs south approximately 1,700 ft to Scenic View. The EPZ crosses I-40 approximately 500 ft. north of Scenic View. The proposed EPZ runs east along Scenic View for approximately 800 ft. to Scenic Hill Lane.

The proposed EPZ runs south and west along Scenic Hill Lane to its termination then runs approximately 1700 ft southeast to Tate Coley Rd.

The proposed EPZ runs approximately 2900 ft west-southwest along Tate Coley Rd to where Tate Coley Rd makes a northern turn. Rather than follow Tate Coley Rd north, the proposed EPZ continues west-southwest through wooded land to intersect with Liles Rd.

Upon intersecting with Liles Rd., the proposed EPZ turns northwest and runs along Liles Rd. until its intersection with Tate Coley Road where it turns west and continues along Tate Coley Road. Tate Coley Road then makes a northern turn and continues with 2-miles of the Clinch River center point for a short distance. Rather than continue along Tate Coley Rd, where it makes this turn, the proposed EPZ continues west through pastureland to intersect with Eblan Cave Road at its intersection with Tate Coley Rd.

The proposed 2-mile EPZ continues southwest through wooded land west of Eblen Cave Rd. for approximately 2100 ft before turning northwest and running northwest through primarily wooded land to the intersection of Poplar Springs Creek and Old Poplar Springs Road.

The proposed 2-mile EPZ runs west along Old Poplar Springs Road, continuing to Poplar Springs Road and continuing north-northwest through wooded land to Cedar Brook Lane.

The proposed EPZ runs northwest along Cedar Brook Lane to Gallaher Rd, then runs northeast along Gallaher Rd. for approximately 1100 ft to Roberts Branch. The proposed EPZ follows Roberts Branch north through wooded land to Gallaher Ferry Rd near the intersection with Broadberry Ave.

The proposed EPZ then follows E Rarity Ridge Pkwy north and northwest to Hatleyberry St. to its intersection with Gallaher Ferry Rd. The proposed EPZ then crosses the Clinch River and runs northeast along railroad tracks to the electrical distribution transmission corridor at Hwy 58.

TENNESSEE EMERGENCY MANAGEMENT AGENCY
OFFICE OF THE DEPUTY COMMISSIONER
3041 Sidco Dr., P. O. Box 41502
Nashville, Tennessee 37204-1502
(615) 741-0001

DEPUTY COMMISSIONER
DAVID W. PURKEY

MAJOR GENERAL
TERRY MAX HASTON
THE ADJUTANT GENERAL

April 8, 2015

Mr. Daniel P. Stout
Senior Manager, Small Modular Reactors
Tennessee Valley Authority
BR-5B-C
1101 Market St.
Chattanooga, TN 37405

Dear Mr. ~~Stout~~, Daniel

This letter is in response to your letter dated February 12, 2015, regarding the proposed Clinch River small modular reactor (SMR) project. In this correspondence you noted that TVA is anticipating an early site permit application for the Clinch River site. Further, you noted TVA's intention to request a fence line EPZ or a 2 mile EPZ for this site, due to the nature of the SMR design and its enhanced safety features.

On December 17, 2014 ~~12, 2015~~, staff from the Tennessee Emergency Management Agency (TEMA) participated via conference call in the public presentation by the Nuclear Energy Institute and TVA to the Nuclear Regulatory Commission (NRC) staff regarding the proposed SMR mentioned above. At the conclusion of this presentation, the NRC staff made the determination that it was not given sufficient information to make a recommendation to the NRC regarding the appropriateness of a fence line or 2 mile EPZ. TEMA must concur with the NRC staff at this time that a determination of the EPZ for this proposed project is premature, given the lack of specific information on the nature and design of the proposed SMRs.

Specifically, information regarding the source term of the fuel for the SMRs needs to be identified. Additionally, specific information on the SMR's design and passive safety systems must be made available for review before any EPZ recommendation can be supported. We also concur with Roane County that an Emergency Alert System which is compatible with the system used by the Department of Energy is needed. Until these and other technical questions have been addressed, sufficient information is simply not available to make a determination regarding the appropriate EPZ for this proposed project.

TEMA will remain a strong supporter of this project and will gladly voice this support to the NRC. However, until more complete technical information is available and the Draft Evacuation Time Estimate study is reviewed, we are not in a position to comment one way or another regarding the appropriate EPZ for the project.

Should you have any questions or concerns, please feel free to contact Mr. Tim Holden, TEMA's Fixed Nuclear Facilities program manager, at 615-741-2128 or tholden@tnema.org, or his staff. I can assure you that they will cooperate with you in any way possible.

Sincerely,

David W. Purkey, MPH
Deputy Commissioner

CC: Mr. Conrad Burnside, FEMA R-IV
Mr. John Pelchat, NRC R-II
Ms. Debra Shults, Director, RAD Health
Mr. Ron Woody, County Executive, Roane County
Mr. Bill Worth, TEMA Regional Administrator