

## ClinchRiverESPHFNPEm Resource

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**From:** Fetter, Allen  
**Sent:** Friday, June 16, 2017 2:31 PM  
**To:** Schiele, Raymond Joseph  
**Cc:** Sutton, Mallecia; pshastings (pshastings@tva.gov); ClinchRiverESPSafRAINPEm Resource; Colaccino, Joseph; Tammara, Seshagiri  
**Subject:** Draft RAI pertaining to Section 2.1.3, Population Distribution, RAI Number 4, eRAI-8857  
**Attachments:** CRNS ESP Draft RAI PD04 8857.pdf

Good Afternoon,

Attached is a draft RAI pertaining to Section 2.1.3, Population Distribution, for the Clinch River Nuclear Site ESP application review.

This is the fourth draft safety RAI prepared (Number 4) for the Clinch River Nuclear Site ESP application review, and it has a unique e-RAI identifying number of eRAI-8857.

TVA has ten working days to review this draft RAI and to decide whether a conference call is needed to clarify any of portion of the RAI and/or if TVA identifies any proprietary information or security-related information (SRI) located in the question(s). After the call, or after ten days, NRC will finish processing the RAI through the eRAI system and issue it to TVA as a final RAI. Subsequent to receipt of the final RAI, TVA will have 30 calendar days to respond to the RAI unless additional time is specifically requested.

Please let me know if you have any questions.

Thanks,

Allen H. Fetter, Senior Project Manager  
U.S. Nuclear Regulatory Commission  
Office of New Reactors  
Division of New Reactor Licensing  
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**Hearing Identifier:** ClinchRiver\_ESP\_HF\_NonPublic  
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**Subject:** Draft RAI pertaining to Section 2.1.3, Population Distribution, RAI Number 4, eRAI-8857  
**Sent Date:** 6/16/2017 2:30:40 PM  
**Received Date:** 6/16/2017 2:30:00 PM  
**From:** Fetter, Allen

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**Post Office:**

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
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CRNS ESP Draft RAI PD04 8857.pdf		83784

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**Draft Request for Additional Information, Number 4, eRAI-8857**

Issue Date: 06/16/2017

Application Title: Clinch River Nuclear Site, ESP

Operating Company: Tennessee Valley Authority

Docket No. 52-047

Review Section: 02.01.03 - Population Distribution

Application Section: 2.1.3

QUESTION

02.01.03-01

RG 1.206 provides guidance regarding the information that is needed to ensure that the information identified and evaluated to meet the siting criteria in 10 CFR 100.20(a) and 10 CFR 100.21(b). The applicant used USCB census-delineated urban areas in the region based on population density. The two urban areas identified are the Knoxville (4.8 mi southeast) urban area with the combination of smaller cities including Lafollette, Oak Ridge, Clinton, Loudon, Lenoir City, Alcoa, Maryville, Farragut, Rockwood, Seymour, and Knoxville; and the Cleveland (45 mi south-southwest) urban area with the combination of smaller cities including Calhoun, Charleston Hopewell, and Cleveland, Tennessee. The Knoxville and Cleveland urban areas had 2010 populations of 558,696 and 66,777 persons, respectively. The distances of these identified urban areas are much greater than the one and one-third times the distance from the site center point to the outer boundary of the LPZ.

The applicant considered meeting the population center distance requirement (10 CFR 100.21(b)), based on the distances from the site center point to the boundary of each of the two identified urban areas in Knoxville, Tennessee, which is 4.8 mi southeast and Cleveland, Tennessee, which is 45 mi south-southeast. Both of these population centers are much greater than the one and one-third times the distance from the site center point to the outer boundary of the LPZ. But the applicant followed an approach by using urban area designation with combination of smaller cities for complying with the population center distance of one and one-third times the distance from the reactor to the outer boundary of LPZ. This approach differs from the regulatory requirement, and could set a new precedent as it considers and combines various small cities of lesser than 25,000 people, rather than considers a city with a densely populated. This effectively changes the distances identified to meet the regulatory requirements. Although in this case the result may be more conservative, the analysis is still not in accordance with the regulatory definitions or requirements as specified in 10 CFR 100.21(b). Therefore, the staff requests the applicant in RAI 2.1.3-1 to revise the evaluation methodology in meeting the 10 CFR 100.21(b) regulatory requirement, solely based on considering the nearest city having population of 25,000 or more people.