

February 11, 2017

MEMORANDUM TO: Joseph E. Donoghue, Chief  
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Division of New Reactor Licensing  
Office of New Reactors

FROM: Patricia J. Vokoun, Project Manager **/RA/**  
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Office of New Reactors

SUBJECT: SUMMARY REPORT FOR THE AUDIT RELATED TO THE  
TENNESSEE VALLEY AUTHORITY'S SUPPLEMENTAL  
INFORMATION TO SUPPORT THE EARLY SITE PERMIT  
ENVIRONMENTAL REPORT

A team of the U.S. Nuclear Regulatory Commission (NRC) staff performed an audit of Environmental Report, "Clinch River Nuclear Site - Early Site Permit Application, Part 3," and a proposed updated siting study provided by Tennessee Valley Authority related to the Early Site Permit for the Clinch River Nuclear site in Oak Ridge, Tennessee. The audit was conducted by the NRC staff from the Office of New Reactors (NRO), Division of New Reactor Licensing, Division of Site Safety and Environmental Analysis, and Division of Safety Systems and Risk Assessment on November 2 and 17, 2016, at the Excel Services' offices in Rockville, Maryland. The results of the audit are presented in the enclosure. The NRC staff performed the audit in accordance with the Audit Plan (Agencywide Documents Access and Management System Accession No. ML16285A388). The audit summary report was developed in accordance with NRO-REG-108, "*Regulatory Audits.*"

Docket No: 52-047

Enclosure: As stated

cc w/encl.: See next page

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EARLY SITE PERMIT ENVIRONMENTAL REPORT

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NRO-002

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(Revised 10/17/2016)

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# **SUMMARY REPORT FOR THE AUDIT RELATED TO THE TENNESSEE VALLEY AUTHORITY'S SUPPLEMENTAL INFORMATION TO SUPPORT THE EARLY SITE PERMIT ENVIRONMENTAL REPORT**

## **Background**

A team of the U.S. Nuclear Regulatory Commission (NRC) staff performed an audit of Environmental Report (ER), "Clinch River Nuclear Site - Early Site Permit Application, Part 3," and a proposed updated siting study provided by Tennessee Valley Authority (TVA) related to the Early Site Permit for the Clinch River Nuclear site in Oak Ridge, Tennessee in accordance with the Audit Plan. The audit was conducted by the NRC staff from the Office of New Reactors (NRO), Division of New Reactor Licensing (DNRL), Division of Site Safety and Environmental Analysis (DSEA), and Division of Safety Systems and Risk Assessment as well as Pacific Northwest National Laboratory (PNNL). It was held on November 2 and 17, 2016, at Excel Services' offices in Rockville, Maryland. The NRC staff performed the audit in accordance with the Audit Plan (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16285A388). The audit summary report was developed in accordance with NRO-REG-108, "*Regulatory Audits*."

## **Objectives**

The objectives of the audit were to determine if the proposed siting study and revised ER adequately reflect the siting process, if the assumptions made are consistent with the regulations, and if the applicant's information was adequately supported by documentation to allow NRC to find that the documentation addressed the guidance set forth in NUREG-1555 "Standard Review Plans for Environmental Reviews for Nuclear Power Plants: Environmental Standard Review Plan" (ESRP) and in Interim Staff Guidance (ISG)-26, "Environmental Issues Associated with New Reactors" and ISG-27, "Specific Environmental Guidance for Light Water Small Modular Reactor Reviews." The staff also drew from experiences gained in previous reviews. The NRC staff must have sufficient information to ensure that environmental impacts can be consistently evaluated and documented in the NRC staff's environmental review.

## **Audit Location and Dates**

The audit was held at the offices of Excel Services, 11921 Rockville Pike, Rockville, Maryland, 20852, on Wednesday, November 2, 2016, from 9:00 a.m. until 12:30 p.m. The audit was held in the electronic reading room from October 31, 2016 through November 17, 2016. The audit was concluded at the offices of Excel Services on Thursday, November 17, 2016, from 9:00 a.m. until 10:30 a.m.

Enclosure

### Audit Team Members

The meeting was attended by NRC, PNNL, TVA and its contractors. NRC staff attending the audit and their areas of responsibility are as follows:

Name	Area of Responsibility, Affiliation	November 2 attendance	November 17 attendance
Patricia Vokoun	Environmental Project Manager, NRO/DNRL/LB3	x	x
Andrew Kugler	Technical Reviewer, NRO/DSEA	x	x
Katherine Cort	Technical Reviewer, PNNL	*	*
Kimberly Leigh	Deputy Team Lead, PNNL	*	*
Daniel Mussatti	Technical Reviewer, NRO/DSEA	x	
Peyton Doub	Technical Reviewer, NRO/DSEA	x	
Jack Cushing	Technical Reviewer, NRO/DSEA	x	

\*Attendance by conference bridge line only

The applicant's audit team members attending the audit and their affiliations were as follows:

Name	Affiliation	November 2 attendance	November 17 attendance
Peter Hastings	Tennessee Valley Authority	x	
Jeff Perry	Tennessee Valley Authority	x	*
Dan Stout	Tennessee Valley Authority	x	x
Kevin Casey	Tennessee Valley Authority	x	
Ruth Horton	Tennessee Valley Authority	x	x
John Holcomb	Tennessee Valley Authority	x	x
Ray Schiele	Tennessee Valley Authority	x	
Roger Scott	Tennessee Valley Authority	*	
Alex Young	Tennessee Valley Authority	*	
Harrison Bogema	Tennessee Valley Authority		*
Susan Smillie	McCallum Turner	x	x
Bobbie Hurley	AECOM	*	
Kyle Turner	McCallum Turner	*	
Erika Grace	AECOM	x	x

\*Attendance by conference bridge line only

### Documents that were Audited

The audit focused on the TVA's supporting documentation for information found in publicly available reports, publicly available web pages, and previously issued documents such as the environmental report. It included review of site selection information in support of the application (now publically available at ADAMS Accession No. ML16350A429). TVA also described the methodology used in their development of portions of the environmental report and related technical reports.



### Audit Activities

The audit was performed in accordance with the Audit Plan (ADAMS Accession No. ML16285A388). Each face-to-face audit began with an opening statement. On November 2, Peter Hastings (TVA) described the information that was available to the NRC audit team. Patricia Vokoun (NRC) followed this with thanks to TVA for coordinating the logistics of the meeting and for providing the information for NRC review and discussion. Ms. Vokoun described the objectives of the audit, stated that the meeting was an early step in the environmental review process, and that follow up activities were likely to occur. The NRC audit team then introduced themselves and their areas of responsibilities. John Holcomb gave a slide presentation that summarized changes TVA made to the siting study.

The document, "Submittal of Supplemental Information Related to Site Selection in Support of the Early Site Permit Application for Clinch River Nuclear Site," (ADAMS Accession No. ML16350A429) was discussed. It includes information needed to complete the environmental review of the application. The NRC audit team reviewed and discussed the information provided by TVA and supporting documentation.

As the NRC audit team members concluded their activities, they were debriefed as a group by the NRC Environmental Project Manager (EPM) on their findings and assessments.

### Exit Briefing

The NRC EPM called the exit briefing to order. The concern expressed by the NRC audit team was the need to receive detailed supporting information on the docket to determine if the docketed alternatives analysis is adequate to be documented in the NRC staff's environmental impact statement. However, the NRC audit team concluded that TVA's analysis in the documentation reviewed during the audit was adequate to support acceptance of the application.

### Open Items and Proposed Closure Paths

The primary open item from the audit is the need to receive detailed supporting information on the docket. The proposed closure path is for TVA to provide detailed application information on the docket in December 2016.

### Deviations from the Audit Plan

There were no deviations from the audit plan.