

From: Buckberg, Perry
Sent: Thursday, February 3, 2022 2:22 PM
To: Taylor, Andrew Charles
Cc: Victor, William Ross
Subject: SQN TSTF-505 Audit Questions - EEEB Follow-up - L-2021-LLA-0145
Attachments: Audit Questions - Sequoyah TSTF-505 EEEB 2-3-2022 L-2021-LLA-0145.pdf

Andy,

The September 15, 2021, Audit Plan (ML21246A053) includes that “.....the NRC staff will provide the licensee with audit questions and audit-related requests so that the licensee can better prepare for audit discussions with NRC staff.”

We discussed the initial staff questions (ML21336A394) and TVA responses during the January 25- 28, 2022, formal audit meeting. Attached are NRC staff follow-up audit questions related to Electrical Engineering. Please post the responses to the Certrec Portal and we can discuss the status after staff review of the responses.

Thanks,

Perry Buckberg

Senior Project Manager / Agency 2.206 Petition Coordinator

U.S. Nuclear Regulatory Commission

Office of Nuclear Reactor Regulation

office: (301)415-1383

perry.buckberg@nrc.gov

Mail Stop O-8B1a, Washington, DC, 20555-0001

Hearing Identifier: NRR_DRMA
Email Number: 1509

Mail Envelope Properties (BLAPR09MB74092D4C8A393F958A5C17F99A289)

Subject: SQN TSTF-505 Audit Questions - EEEB Follow-up - L-2021-LLA-0145
Sent Date: 2/3/2022 2:21:46 PM
Received Date: 2/3/2022 2:21:00 PM
From: Buckberg, Perry

Created By: Perry.Buckberg@nrc.gov

Recipients:
"Victor, William Ross" <wrvictor@tva.gov>
Tracking Status: None
"Taylor, Andrew Charles" <actaylor@tva.gov>
Tracking Status: None

Post Office: BLAPR09MB7409.namprd09.prod.outlook.com

Files	Size	Date & Time	
MESSAGE	894	2/3/2022 2:21:00 PM	
Audit Questions - Sequoyah TSTF-505 EEEB 2-3-2022		L-2021-LLA-0145.pdf	129149

Options
Priority: Normal
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:

AUDIT QUESTIONS FOLLOW-UP – ELECTRICAL ENGINEERING

TSTF-505, REVISION 2

SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2

By license amendment request (LAR) dated August 5, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21039A648, the Tennessee Valley Authority (TVA) requested changes to the Sequoyah Nuclear Plant Units 1 and 2 Technical Specifications (TSs). The proposed changes would modify TS requirements to permit the use of Risk Informed Completion Times with the implementation of NEI 06-09, "Risk-Informed Technical Specifications Initiative 4b, Risk-Managed Technical Specifications (RMTS) Guidelines."

In preparation for virtual audit meeting held January 25-28, 2022, NRC Electrical Engineering staff requested (1) documentation - one line diagrams (AC distribution and safety-related AC and DC buses) and shared safety-related electrical loads between units; (2) an electrical presentation on normal and emergency lineups employing available offsite sources (Unit Station Service Transformers (USSTs) and Common Station Service Transformers (CSSTRs)) and onsite sources - Emergency Diesel Generators (EDGs); and (3) responses to ten Electrical Engineering audit questions (ADAMS Accession No. ML21336A394) directly related to changes to electrical TSs. TVA responded to the staff requests in part prior to and during the audit meeting. The NRC staff is requesting the information and clarifications identified below.

The staff noted that certain terms (load groups, divisions, trains, and channels) were not consistently used in the proposed LCO changes in the LAR. This is prevalent in LAR Table E1-1 columns 3 and 6 in applying those terms to both units combined. The staff is requesting the following information in relation to original documentation, presentation, and responses to audit question requests:

1. Documentation:
 - a. Please provide the following on portal:
 - i. Shutdown loads on each 6.9 kV and 480 V Shutdown Bus and Unit designator for each.
 - ii. Procedures to address loss of one and also two 6.9 kV Shutdown Board(s) (in one load group) and corresponding loss of affected 480 V Shutdown Boards.
 - iii. Procedures for partial LOOP either entire 161 kV switchyard or 500 kV switchyard.
 - iv. During audit, it was identified that some electrical one-line diagrams on portal were not accessible to EEEB staff with that access again requested.

2. Electrical Presentation by TVA on 01-26-22:
 - a. Please provide the designated purpose of shutdown utility bus.
 - b. Please indicate if for loss of main generator for either unit, the initial offsite source is through its main bank transformer and USST with alternate offsite source being the respective CSSTR and Start Buses.
 - i. Please further indicate how transfers are made at CSSTRs, unit boards, and 6.9 kV shutdown boards either automatically or manually.

AUDIT QUESTIONS FOLLOW-UP – ELECTRICAL ENGINEERING

TSTF-505, REVISION 2

SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2

- c. Please indicate when and why FLEX 6.9 kV and 480 V diesels are used in regard to LCOs in TS Section 3.8 proposed for changes in the LAR.
 - d. Please provide access to all slides used during Electrical Presentation
3. Audit Questions:
- a. Clarification
 - i. Clarify the number of boards per train covered by TS 3.8.9.A, 3.8.9.B
 - ii. TS LCO 3.8.7 require Train A and Train B inverters to be operable. Clarify the number of channels per train in column 3 and ensure consistency between column 3 and 6
 - b. Please verify that each electrical LCO proposed for changes in the LAR, especially ones listed below, is in agreement with what is stated in LAR Table E1-1 and also verify that there is agreement between columns 3 and 6 for each of those LCOs in the table.
 - i. Please determine if column 6 of LAR Table E1-1 for LCO 3.8.1.A should be revised to refer to minimum offsite sources for one load group (one offsite source per 6.9 kV shutdown board in a load group or some wording equivalent to that.
 - ii. Please determine if column 3 of LAR Table E1-1 for LCO 3.8.1.B should be revised to refer to load groups so there is consistency between columns 3 and 6.
 - iii. For LAR Table E1-1 for LCOs 3.8.4.A & B – please determine if the Design Success Criteria (DSC) should be revised to “One DC train A (channels I and III) or Train B (channels II and IV)” or something equivalent to that.
 - iv. For LAR Table E1-1 for LCOs 3.8.7.A – please determine if the DSC should be revised to “Two inverters for channels (I and III or II and IV) for RPS and ESFAS initiation” or something equivalent to that.
 - v. For LAR Table E1-1 for LCOs 3.8.9.C – please determine if the DSC should be revised to indicate “One train of vital DC electrical power distribution (two 125 V DC boards (I and III or II and IV)” or something equivalent to that.