



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

July 26, 2013

Mr. Joseph W. Shea
Vice President, Nuclear Licensing
Tennessee Valley Authority
1101 Market Street LP 3D-C
Chattanooga, TN 37402

SUBJECT: SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2 - PLAN FOR THE REGULATORY AUDIT REGARDING SEISMIC WALKDOWNS , TO SUPPORT IMPLEMENTATION OF NEAR-TERM TASK FORCE RECOMMENDATION 2.3 RELATED TO THE FUKUSHIMA DAI-ICHI NUCLEAR POWER PLANT ACCIDENT (TAC NOS. MF0176 AND MF0177)

Dear Mr. Shea:

On March 12, 2012, the U.S. Nuclear Regulatory Commission (NRC) staff issued a request for information letter¹ per Title 10 of the *Code of Federal Regulations*, Subpart 50.54(f) (50.54(f) letter). The 50.54(f) letter was issued to power reactor licensees and holders of construction permits requesting addressees to provide further information to support the NRC staff's evaluation of regulatory actions to be taken in response to lessons learned from Japan's March 11, 2011, Great Tōhoku Earthquake and subsequent tsunami. The 50.54(f) letter addressed the methods and procedures for plants to conduct seismic and flooding hazard walkdowns to identify and address degraded, nonconforming, or unanalyzed conditions through the corrective action program, and to verify the adequacy of the monitoring and maintenance procedures.

By letter dated November 27, 2012, Tennessee Valley Authority (TVA, the licensee) submitted a Seismic Walkdown Report as requested per Enclosure 3, "Recommendation 2.3: Seismic," of the 50.54(f) letter for the Sequoyah Nuclear Plant (SQN), Units 1 and 2. The NRC staff plans to conduct a regulatory audit in accordance with the enclosed regulatory audit plan from August 27-29, 2013, to verify information and gain a better understanding of your conduct of the seismic walkdowns at SQN, Units 1 and 2.

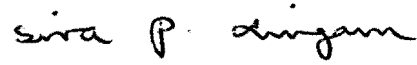
¹ Located in the Agencywide Documents Access and Management System (ADAMS) at Accession No. ML12053A340.

J. Shea

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If you have any questions, please contact me by telephone at 301-415-1564 or by e-mail at siva.lingam@nrc.gov.

Sincerely,

Handwritten signature of Siva P. Lingam in cursive script.

Siva P. Lingam, Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos.: 50-327 and 50-328

Enclosure:
Audit plan

cc w/encl: Distribution via Listserv

Audit Plan Sequoyah Nuclear Plant, Units 1 and 2

1. Background

On March 12, 2012, the U.S. Nuclear Regulatory Commission (NRC) staff issued a request for information letter¹ per Title 10 of the *Code of Federal Regulations*, Subpart 50.54(f) (50.54(f) letter). The request addressed, in part, the conduct of seismic walkdowns to identify and address degraded, non-conforming, or unanalyzed conditions through the corrective action program, and to verify the adequacy of the monitoring and maintenance procedures.

2. Regulatory Audit Bases

The NRC staff is conducting regulatory audits at a small number of operating reactors to gain a better understanding of the seismic walkdown methods and associated procedures used by licensees to prepare the Seismic Walkdown Report and to assist the staff in preparing its safety assessment.

The guidance for performing the seismic walkdowns was developed by the Electric Power Research Institute (EPRI) with extensive review and input from NRC staff in numerous public meetings, webinars, and public conference calls during its development. The EPRI submitted EPRI-1025286, "Seismic Walkdown Guidance for Resolution of Fukushima Near-Term Task Force Recommendation 2.3: Seismic"² (walkdown guidance) for endorsement, and the staff subsequently endorsed the walkdown guidance by letter dated May 31, 2012³.

The 50.54(f) letter and the walkdown guidance are the basis documents for the conduct of the regulatory audit.

3. Regulatory Audit Scope

The purpose of the seismic site audit will be to gain a better understanding of the conduct and outcomes of the seismic walkdowns and identify any need for additional information to facilitate the NRC staff's review of the licensee's walkdown report and prepare the staff assessment. If necessary, the NRC staff will request additional information using the appropriate regulatory process.

The scope of this regulatory audit is to determine if the seismic walkdowns conducted by the Tennessee Valley Authority (TVA, the licensee) to identify and address degraded, non-conforming, or unanalyzed conditions, were conducted in accordance with the 50.54(f) letter and the walkdown guidance; and whether TVA verified the adequacy of the monitoring and maintenance procedures in compliance with the 50.54(f) letter and the walkdown guidance.

¹ Located in the Agencywide Documents Access and Management System (ADAMS) at Accession No. ML12053A340.

² Located in ADAMS at Accession No. ML12164A181

³ Located in ADAMS at Accession No. ML12145A529

The general process used to conduct the regulatory audit involves examination of related seismic walkdown documents, discussions with the seismic walkdown program participants, and examination of selected equipment or areas of the site that were walked down. This process is tailored for a site-specific audit as applicable.

The staff reviewed the licensee's walkdown report and compared it with the requested information in the 50.54(f) letter and the walkdown guidance. The factors that the NRC staff considered in choosing sites to audit were based, in part, on one or more of the following:

- Questions concerning whether the walkdown was performed consistent with the guidance
- Consideration of feedback and information gained during performance of regional inspections (e.g., Temporary Instruction 2515/188)
- Consideration of apparent seismicity relative to the current design basis or margins identified in the Individual Plant Examination for External Event (IPEEE) reviews

Sections 4, 8, and 9 provide additional details regarding documentation needed, schedule, and specific focus areas.

4. Information Needs

The licensee is requested to have the following information available on site for the audit team. The information could be provided electronically or by paper copies. If provided electronically, the licensee is requested to have at least two computers available for the audit team, with a printer attached.

- Engineering reports and procedures, which contain requirements or guidelines for the implementation of the seismic walkdown guidance, including current seismic licensing basis.
- Description of process used for the peer review and the peer review report.
- Implementing procedures for the 10 CFR 50.54(f) letter, Enclosure 3, Seismic Walkdowns.
- Procedure for development of the seismic walkdown base lists and equipment lists (i.e., Seismic Walkdown Equipment List [SWEL] 1 and SWEL 2).
- Drawings of equipment anchorages for equipment selected for anchorage verifications.
- Discussion of training and qualifications (per Section 2 of the walkdown guidance) for personnel associated with seismic walkdown activities.
- Description of the process for licensing basis evaluations (per Section 5 of the walkdown guidance) and entry into the corrective action program, including condition report number, title, and brief summary of the issue or observation and its disposition.

- The list of seismic vulnerabilities that were identified during the IPEEE program, as discussed in Section 7 of the guidance document.
- The original walkdown and walk-by checklists

The NRC staff also requests that the licensee make the personnel that performed the walkdowns (including site staff and contractors) accessible upon request (either in person or by phone).

Additional information needs identified during the audit will be communicated to the designated point of contact.

5. NRC Audit Team

Area of Review	Assigned Auditor
Team Lead	James Isom (NRC)
Technical Lead	Frankie Vega (NRC)
Technical Support	Wesley Deschaine (NRC)
Technical Support	Tze-Jer Chuang (NRC)
Technical Support	David Ma (contractor)
Management Support	Rebecca Karas (NRC)

6. Logistics

The audit will be conducted at Sequoyah Nuclear Plant (SQN), Units 1 and 2, from August 27-29, 2013. Entrance and exit briefings will be held with the licensee at the beginning and end of this audit, respectively, as well as daily debriefings of team activities. A more detailed proposed audit schedule is provided below.

7. Deliverables

An audit report/summary should be issued to the licensee within 90 days from the end of the audit. Additionally, the results of the audit will be utilized to focus the scope of any requests for additional information issued in the course of this review.

8. Proposed Seismic Walkdown Audit Schedule

Tuesday, August 27

7:30 a.m.	Arrival of audit team members and site badging
10:00 a.m.	Entrance Meeting
10:30 a.m.	Walkdown Process Orientation with licensee
11:30 a.m. - 12:15 p.m.	LUNCH
12:15 p.m. - 4:00 p.m.	Discussions with licensee, NRC document review, or plant walkdowns
4:00 p.m.	Team meeting
5:30 p.m.	Team Lead daily debrief with licensee

Wednesday, August 28

7:30 a.m.	Team meeting
8:30 a.m.	Continue discussions with licensee, plant walkdowns, etc.
11:30 a.m. - 12:15 p.m.	LUNCH
12:15 p.m. - 4:00 p.m.	Discussions with licensee, plant walkdowns, etc.
4:00 p.m.	Team meeting
5:30 p.m.	Team Lead daily debrief with licensee

Thursday, August 29

7:30 a.m.	Team meeting
8:30 a.m.	Continue discussions with licensee, plant walkdowns, etc.
11:30 a.m. - 12:15 p.m.	LUNCH
12:15 p.m. - 3:00 p.m.	Discussions with licensee, plant walkdowns, etc.
3:00 p.m.	Exit Meeting

9. Specific Topics for Discussion

The review will touch upon several key areas of the walkdown activities undertaken by SQN, Units 1 and 2, including:

- Qualification and training of participants
- Development of SWEL 1 and SWEL 2
- Participation of operations staff
- Conduct of the walkdowns
- Process to address potential seismic issues identified in the walkdowns
- The peer review process

During the NRC's review of the walkdown report, some items of particular interest were identified.

- The seismic walkdown guidance document provides guidance on the need for participants to have certain specific backgrounds and qualifications to effectively carry out their roles. The NRC staff would like to discuss the backgrounds of the team members as it relates to experience in the seismic field and walkdown training.
- The seismic walkdown guidance provides instructions on the scope of the peer review and the experience and independence of the peer reviewers. The NRC staff would like to discuss the conduct of the peer review.
- The seismic walkdown guidance provides guidance and instructions on both the conduct and the reporting of the seismic walkdowns and area walk-bys. The NRC staff would like to discuss the conduct of the equipment walkdowns and area walk-bys, including the approach to anchorage verification, the approach to inspecting cabinets, the schedule for conducting the audits, and the treatment of the checklists.
- The seismic walkdown guidance provides clear guidance on the approach to addressing potential seismic issues found in the walkdowns. The NRC staff would like to discuss the approach used to disposition potential issues identified, including the reporting of issues not shown to be in compliance with the licensing basis, the timeline for these activities, as well as the current status and reporting of items entered into the corrective action program.

J. Shea

- 2 -

If you have any questions, please contact me by telephone at 301-415-1564 or by e-mail at siva.lingam@nrc.gov.

Sincerely,

/RA/

Siva P. Lingam, Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos.: 50-327 and 50-328

Enclosure:
Audit plan

cc w/encl: Distribution via Listserv

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ADAMS Accession No: **ML13143A011**

* concurrence by e-mail

OFFICE	NRR/DORL/LPL2-2/PM	NRR/JLD/LA/	NRR/JLD/PMB/PM*
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OFFICE	NRR/DIRS/TL*	NRO/DSEA/DD*	NRR/DORL/LPL2-2/BC (A)
NAME	Jlsom	NChokshi	DBroaddus
DATE	07/25/2013	07/24/2013	07/26/2013

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