



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

January 23, 2015

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

10 CFR 2.201

Sequoyah Nuclear Plant, Units 1 and 2
Facility Operating License Nos. DPR-77 and DPR-79
NRC Docket Nos. 50-327 and 50-328

Subject: **Response to Apparent Violations in NRC Inspection Report
05000327/2014008, 05000328/2014008, AND INVESTIGATION
REPORT NO. 2-2013-006; EA-14-003**

Reference: Letter from NRC to TVA, "Sequoyah Nuclear Plant - Inspection
Report 05000327/2014008, 05000328/2014008; INVESTIGATION
REPORT NO. 2-2013-006; AND APPARENT VIOLATIONS" dated
December 29, 2014

Enclosure 1 to this letter provides Tennessee Valley Authority's (TVA) response to the subject apparent violations of 10 CFR 50.48(a)(1) and 10 CFR 50.9(a) of Nuclear Regulatory Commission (NRC) regulations. The basis for these apparent violations are documented in NRC's letter to Mr. Joseph W. Shea, dated December 29, 2014. Enclosure 2 provides a timeline of events related to the apparent violations.

There are no regulatory commitments contained in this submittal. If you have any questions, please call Ms. Erin K. Henderson, Site Licensing Manager at (423) 843-7170.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. W. Shea', written over a printed name and title.

J. W. Shea
Vice President, Nuclear Licensing

Enclosure

cc: See Page 2

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- Enclosure:
1. Response to Apparent Violations in NRC Inspection Report 05000327/2014008, 05000328/2014008, AND INVESTIGATION REPORT NO. 2-2013-006; EA-14-003
 2. SQN Fire Watch NRC Apparent Violations - Timeline

cc: (Enclosure)

Regional Administrator - Region II
NRC Branch Chief - Region II
NRC Senior Resident Inspector - Sequoyah Nuclear Plant
NRC Project Manager - Sequoyah Nuclear Plant

ENCLOSURE 1

**Tennessee Valley Authority (TVA)
Sequoyah Nuclear Plant (SQN)
Units 1 and 2**

**Response to Apparent Violations in NRC Inspection Report 05000327/2014008,
05000328/2014008,
AND INVESTIGATION REPORT NO.
2-2013-006; EA-14-003**

ENCLOSURE

Response to Apparent Violations in NRC Inspection Report 05000327/2014008, 05000328/2014008, AND INVESTIGATION REPORT NO. 2-2013-006; EA-14-003

Restatement of Apparent Violation 05000327, 05000328/2014008-01, Failure to Implement Proper Control of Fire Protection Impairments

1. Failure to Perform Required Fire Watches

10 CFR 50.48, *Fire Protection*, requires that a licensee must have a fire protection plan that, in part, outlines the plans for fire protection, fire detection, suppression capability, and limitation of fire damage.

Sequoyah Nuclear Plant Units 1 and 2 Technical Specification 6.8.1.f requires, in part, that written procedures be established, implemented, and maintained covering the activities involved with Fire Protection Program implementation.

TVA Corporate Procedure NPG-SPP-18.4.6, Control of Fire Protection Impairments, Revision 1, requires, in part:

- Section 3.6.A, requires fire watch supervisors communicate fire watch requirements
- Section 3.2.6.A, states that fire watches are utilized for the surveillance of areas where fire protection systems are impaired.
- Section 4.2.B, states that Fire Watch Route Sheets will be retained by Fire Protection for 90 days.
- Appendix A, Section 3.2 requires fire watches to complete Form NPG-SPP-18.4.6-2 Fire Watch Route Sheet, as each area is patrolled.

Fire Protection Impairment Permit FOR120937 dated October 02, 2012, established an hourly fire watch for a diesel generator board room air intake fire damper that failed to close and was considered to be impaired.

Contrary to the above, on multiple occasions during October and November 2012, the licensee willfully failed to implement procedures covering the activities involved with Fire Protection Program implementation. Specifically, the designated fire watch foremen willfully failed to have proper oversight of fire watch activities. In addition TVA's contractors willfully failed to conduct roving fire watch patrols in the Emergency Diesel Generator Building. Specific examples include:

- Hourly fire watches in areas where fire protection systems were impaired were not performed on multiple occasions.
- Fire Watch Route Sheets were not retained by Fire Protection for 90 days as required by NPG-SPP-18.4.6 section 4.2.
- TVA's contact (*sic*) supervisors deliberately solicited individuals to falsify fire watch forms.

1. TVA Response to the Apparent Violation:

TVA understands and accepts the Apparent Violation. TVA does not dispute the assertion of willful falsification by contractor fire watches (FW).

ENCLOSURE

Response to Apparent Violations in NRC Inspection Report 05000327/2014008, 05000328/2014008, AND INVESTIGATION REPORT NO. 2-2013-006; EA-14-003

Restatement of Apparent Violation 05000327, 05000328/2014008-02, Failure to Maintain Complete and Accurate Records of Fire Watches

2. Failure to Maintain Complete and Accurate Records of Fire Watches

10 CFR 50.9 states, in part, that information required by the Commission's regulations, orders, or license conditions to be maintained complete and accurate in all material respects.

Sequoyah Nuclear Plant Units 1 and 2 Technical Specification 6.8.1.f requires, in part, that written procedures be established, implemented, and maintained covering the activities involved with Fire Protection Program implementation

NPG-SPP-18.4.6, Control of Fire Protection Impairments, Revision 1, Section 3.2.6.A, states that "Fire watches are utilized for the surveillance of areas where fire protection systems are impaired. The compensatory fire watch process is described in Appendix A".

Appendix A to NPG-SPP-18.4.6, Section 3.2.C, specifies compensatory fire watch duties and responsibilities, and requires that compensatory fire watches complete Form NPG-SPP-18.4.6-2 by entering the time and initials as each area is patrolled, and return it to the Fire Protection Foreman/designee at the end of the shift.

NPG-SPP-18.4.6 Rev. 0001, Section 4.2.B, specifies a 90 day retention for Form NPG-SPP-18.4.6-2, Fire Watch Route Sheet.

Fire Protection Impairment Permit FOR120937 dated October 2, 2012, established an hourly fire watch for a diesel generator board room because an air intake fire damper failed to close (was impaired).

Contrary to the above, on multiple occasions in October and November 2012, the licensee failed to maintain complete and accurate records of hourly fire watch patrols. These records were material to the NRC. Specifically, fire watch patrol records required by NPG-SPP-18.4.6, certified hourly fire watches were completed during the fire impairment in the Emergency Diesel Generator Building. However, the NRC has determined that in fact many fire watches were not performed. The hourly fire watch patrol data is material to the NRC because it provides evidence of compliance with NRC safety requirements.

2. TVA Response to the Apparent Violation:

TVA understands and accepts the Apparent Violation.

ENCLOSURE

Response to Apparent Violations in NRC Inspection Report 05000327/2014008, 05000328/2014008, AND INVESTIGATION REPORT NO. 2-2013-006; EA-14-003

Reason for the Apparent Violations:

The willful falsification of FW records and coercion by contractor FW foreman to solicit individuals to falsify records was identified as a result of NRC Office of Investigations inquiry.

The SQN Resident Inspectors initially identified issues concerning the conduct of fire watches and fire watch records in October 2012. The NRC subsequently documented two green, non-cited violations (NCV) regarding these issues in the SQN fourth quarter Integrated Inspection Report. SQN performed causal analyses as a result of the issues that were identified. The actions taken in the associated causal analyses strengthened the oversight process for conducting FWs.

SQN found that these NCVs occurred for the following causes.

- SQN Fire Operations (FO) and contractor supervision responsible for FW implementation did not exercise adequate accountability to detect missing information.
- SQN FO had not maintained positive control of Fire Protection (FP) impairments with regards to FWs.
- Untimely disposition of incomplete or inaccurate log entries on the FW route sheets.
- Inadequate verification practices by the implementing organizations (contractors) due to less than adequate fire route completion, control and documentation reviews.
- Inadequate procedure for performing FW rounds if plant protected equipment was encountered.

In addition, SQN found three contributing causes. These contributing causes were the following.

- Less than adequate pre-job briefings (PJB) for FW personnel.
- Managerial oversight of FWs was not sufficiently intrusive.
- FW implementing organizations were not properly briefed and did not demonstrate an understanding of roles and responsibilities prior to assumption of watch.

These causal analyses are documented in problem evaluation reports (PER) 687981, 687982, 635934, 652672, 637101, and 682505.

Corrective Steps That Have Been Taken And The Results Achieved:

Prior to issuance of the NRC quarterly inspection report, in February 2013, SQN took action and conducted a causal analysis and implemented corrective actions (CA).

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Response to Apparent Violations in NRC Inspection Report 05000327/2014008, 05000328/2014008, AND INVESTIGATION REPORT NO. 2-2013-006; EA-14-003

The following immediate / interim CA were implemented by FO in December 2012.

- Re-established a review of open FWs and routes each shift.
- Confirmed list of all open/ongoing fire impairments that required FWs.
- Developed, maintained, and began a daily updated list of open fire impairments that required a FW.
- Briefed all affected personnel on requirements established in TVA procedure NPG-SPP-18.4.6, Control of Fire Protection Impairments, including required actions for identified deficiencies and changes.

Corrective Actions implemented by FO in January 2013.

- Development and implementation of a Fire Watch / Route Accountability Log to be maintained by the SQN Fire Operations Foreman (FOF).
- Established PJBs each shift to ensure applicable FWs and fire routes are performed in an accountable manner.
- Revised Fire Protection procedure 0-PI-FPU-317-299.W, Operations Fire Protection Weekly Inspection, to conduct two observations of FW duties each week (observations were later incorporated into other SQN processes) and incorporated requirements for the Fire Watch / Route Accountability Log and shift briefings.
- Conducted briefing for FW implementing organizations to ensure accountability of FW.

These CAs are documented in PERs 637101 and 652672.

SQN initiated an additional causal evaluation following receipt of the NRC fourth quarter 2012 Integrated Inspection Report in February 2013. As a result of that evaluation, SQN implemented three additional interim CAs. These actions were as follows.

- Contacting TVA's Office of the Inspector General (OIG) due to a concern with falsification of documentation (i.e., FW records). OIG conducted an investigation. However, PER 977810 was initiated to evaluate if a potential breakdown existed between the TVA OIG investigation completion and notification to the organization that administer plant access regarding potential trustworthiness issues.
- Revised PJB to provide additional details and specificity on roles and responsibilities for logging requirements.
- FO assumed ownership of compensatory FWs from the Modifications group.

These CAs are documented in PER 687981.

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Additionally, following receipt of the NRC fourth quarter 2012 Integrated Inspection Report, SQN completed a causal evaluation to address instances where FWs did not physically enter spaces as part of the required FW rounds, but instead placed a hand on the door to check for heat. SQN determined that NPG-SPP-18.4.6, Appendix A, Section 3.5.A.4 was not adequately followed. Section 3.5.A.4 required the FW to immediately notify the SQN FOF if an area cannot be accessed. As an interim action, FW crews were briefed on the expected action when an impediment was discovered on a FW route. Corrective actions included (1) a revision to NPG-SPP-18.4.6 which provided clarifying information on actions to be taken if an impediment is discovered during a FW route and (2) the implementation of Fire Operations Directive Manual (FODM), Appendix F, Fire Operations Oversight of Compensatory Fire Watches. This causal analysis is documented in PER 687982.

In May 2013, the FODM was developed to implement increased administrative controls at SQN as a pilot for consideration as a future revision to NPG-SPP-18.4.6. The FODM provided necessary guidance for properly conducting and controlling FWs. It also provided the requirements and process for properly reviewing and storing compensatory FW documents. In addition, it provided the requirements and process for providing adequate oversight to ensure procedural requirements and expectations are met. The FODM was applicable to the SQN Fire Operations organization and all personnel assigned to perform compensatory FW duties. Following concurrence from the TVA Fleet, the FODM guidance was incorporated into Revision 4 of NPG-SPP-18.4.6 in November 2013.

The overall impact of the causal evaluations and corrective actions has been paramount in improving SQN's oversight of personnel (including contractors) conducting FWs to ensure compliance with the SQN Fire Protection Program. Since initial discovery in 2012, no willful FW issues have been identified. Additionally, in 2013, SQN Modification and Projects developed and implemented a Gaps to Excellence (GTE) plan for oversight of supplemental personnel (contractors). Specific actions included providing clear roles and responsibilities for Task Managers and Project Manager. It also increased the quantity of required field observations. The GTE actions are documented in PER 722423.

Unescorted Access (UA) for the six individuals identified has been suspended, pending TVA's process for denial, as a result of the NRC Office of Investigation (OI) investigation. Two of the contractor individuals (i.e., FWs) were already removed from TVA's access in April 2013 due to normal attrition. The four contractor foremen remained employed at either SQN or Watts Bar Nuclear Plant at various times until their UA was suspended on December 30, 2014. A sampling review of work activities for the subject individuals at SQN over the last 90 days was conducted and no issues were identified.

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Corrective Steps That Will Be Taken:

During the response development to the Choice Letter, the following observations were identified and placed into the TVA / SQN corrective action program (CAP) for further evaluation and action(s).

TVA has entered the following in the CAP to evaluate whether there was a breakdown between:

- The TVA OIG investigation conclusion and notification to plant access regarding potential trustworthiness issues. The recommended CAs are to ensure there are adequate ties between the OIG investigation process and notification to NPG for potential trustworthiness issues. **[PER 977810]**
- The investigation that was done by TVA in late 2012 and early 2013 and notification to plant access regarding potential trustworthiness. The recommended CAs are to ensure site leadership is aware of the notification requirements in TVA procedure(s) for potential trustworthiness issues. **[PER 977799]**

Date When Full Compliance Will Be Achieved:

SQN is in full compliance. Based on CAs and reviews completed for FW records, SQN has determined that FWs are being properly performed and accurately documented.

ENCLOSURE 2

**Tennessee Valley Authority (TVA)
Sequoyah Nuclear Plant (SQN)
Units 1 and 2**

SQN Fire Watch NRC Apparent Violations - Timeline

SQN Fire Watch NRC Apparent Violations - Timeline

October 29, 2012	NRC Resident Inspector conducted walkdown of control building (i.e., cable spread room and auxiliary instrument room)
November 2, 2012	SQN enters the following in the corrective action program (CAP) <ul style="list-style-type: none"> • PER 635934 (inadequate procedural adherence) • PER 637101 (missed fire watches)
November 29, 2012	NRC Resident Inspector conducted walkdown of emergency diesel generator building and observes fire watch (FW) not physically entering the building during a FW rove. SQN initiates PER 652672
December 6, 2012	PER 637101 completed
February 13, 2013	NRC issues 4th Quarter 2012 Integrated Report that contains two green non-cited violations associated with FW <ul style="list-style-type: none"> • Multiple examples where FWs were not conducted in accordance with (IAW) procedure NPG-SPP-18.4.6 (Revision 1) • Failure to establish adequate procedures needed for fire protection program implementation SQN initiates <ul style="list-style-type: none"> • PER 687981 (FW not conducted IAW procedure) • PER 687982 (FW encountering protected equipment)
February 14, 2013	SQN initiates PER 682505 (FW record discrepancies)
March 28, 2013	PER 687981 completed
April 2, 2013	PER 687982 completed
April 12, 2013	Two contractor personnel who performed FWs leave TVA (unescorted access [UA] revoked due to normal attrition)
May 5, 2013	One of the contractor foreman associated with FWs leaves TVA and UA is revoked. Individual subsequently returns to SQN as contractor on September 24, 2013.
May 15, 2013	FODM issued
November 17, 2013	NPG-SPP-18.4.6, Revision 4 issued (i.e., implements TVA fleet process for FW pre job brief and oversight)
December 13, 2013	NRC Office of Investigations completes their investigation
December 29, 2014	NRC issues Choice Letter to TVA
December 30, 2014	TVA suspends UA for the six individuals
January 15, 2015	SQN initiates <ul style="list-style-type: none"> • PER 977810 (evaluate communications between TVA Office of Inspector General and Access Authorization for trustworthiness issues) • PER 977799 (evaluate notification process for trustworthiness)