



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

CNL-14-130

August 28, 2014

10 CFR 2.202  
10 CFR 50.4

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

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: **Third Six-Month Status Report in Response to the March 12, 2012, Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051) for Sequoyah Nuclear Plant (TAC Nos. MF0794 and MF0795)**

- References:
1. NRC Order Number EA-12-051, "Issuance of Order to Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation," dated March 12, 2012 (ML12054A679)
  2. NRC Interim Staff Guidance JLD-ISG-2012-03, "Compliance with Order EA-12-051, Reliable Spent Fuel Pool Instrumentation," Revision 0, dated August 29, 2012 (ML12221A339)
  3. NEI 12-02, "Industry Guidance for Compliance with NRC Order EA-12-051, 'To Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation,'" Revision 1, dated August 2012 (ML12240A307)
  4. Letter from TVA to NRC, "Tennessee Valley Authority (TVA) - Initial Status Report in Response to the March 12, 2012, Commission Order Modifying Licenses with Regard to Requirements for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)," dated October 29, 2012 (ML12307A105)

5. Letter from TVA to NRC, "Tennessee Valley Authority (TVA) - Overall Integrated Plan in Response to the March 12, 2012, Commission Order Modifying Licenses with Regard to Requirements for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051) for Sequoyah Nuclear Plant," dated February 28, 2013 (ML13063A011)
6. Letter from NRC to TVA, "Sequoyah Nuclear Plant, Units 1 and 2 - Request for Additional Information Regarding Overall Integrated Plan for Reliable Spent Fuel Pool Instrumentation (Order No. EA-12-051) (TAC Nos. MF0794 and MF0795)," dated July 17, 2013 (ML13198A354)
7. Letter from TVA to NRC, "Response to NRC Request for Additional Information Regarding Overall Integrated Plan for Reliable Spent Fuel Pool Instrumentation (Order No. EA-12-051) (TAC Nos. MF0794 and MF0795)," dated August 16, 2013 (ML13235A007)
8. Letter from TVA to NRC, "First Six-Month Status Report in Response to the March 12, 2012, Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051) for Sequoyah Nuclear Plant," dated August 28, 2013 (ML13247A291)
9. Letter from NRC to TVA, "Sequoyah Nuclear Plant, Units 1 and 2 - Interim Staff Evaluation and Request for Additional Information Regarding the Overall Integrated Plan for Implementation of Order EA-12-051, Reliable Spent Fuel Pool Instrumentation (TAC Nos. MF0794 and MF0795)," dated November 21, 2013 (ML13312A415)
10. Letter from TVA to NRC, "Second Six-Month Status Report in Response to the March 12, 2012, Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051) for Sequoyah Nuclear Plant (TAC Nos. MF0794 and MF0795)," dated February 28, 2014 (ML14064A181)

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued an order (Reference 1) to Tennessee Valley Authority (TVA). Reference 1 was immediately effective and directs TVA to install reliable spent fuel pool level instrumentation (SFPLI). Specific requirements are outlined in Attachment 2 of Reference 1.

Reference 1 required submission of an initial status report 60 days following issuance of the final interim staff guidance (Reference 2) and an overall integrated plan pursuant to Section IV, Condition C. Reference 2 endorses industry guidance document Nuclear Energy Institute (NEI 12-02), Revision 1 (Reference 3) with clarifications and exceptions identified in Reference 2. Reference 4 provided the TVA initial status report regarding SFPLI strategies. Reference 5 provided the TVA Sequoyah Nuclear Plant, Units 1 and 2 overall integrated plan. On July 17, 2013, the NRC issued a request for additional information (RAI) (Reference 6) and TVA provided its response on August 16, 2013 (Reference 7).

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Reference 1 requires submission of a status report at six-month intervals following submittal of the overall integrated plan. Reference 3 provides direction regarding the content of the status reports. TVA submitted the first six-month update on August 28, 2013 (Reference 8). The NRC issued its Interim Staff Evaluation and RAIs regarding TVA's overall integrated plan on November 21, 2013 (Reference 9). TVA submitted the second six-month update on February 28, 2014 (Reference 10).

The purpose of this letter is to provide the third six-month status report pursuant to Section IV, Condition C.2, of Reference 1, that delineates progress made in implementing the requirements of Reference 1. The enclosed report provides an update of milestone accomplishments since submittal of the first six-month status report, including any changes to the compliance method or schedule. The enclosed report also provides a status of the response to the RAIs submitted in Reference 9.

The enclosure describes the plans that TVA will use to meet the regulatory requirements outlined in Attachment 2 of Reference 1, but does not identify any additional actions to be taken by TVA. Therefore, this letter contains no regulatory commitments.

If you have any question regarding this submittal, please contact Kevin Casey at (423) 751-8523.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 28th day of August 2014.

Respectfully,

**J. W. Shea**

Digitally signed by J. W. Shea  
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J. W. Shea  
Vice President, Nuclear Licensing

Enclosure:

Tennessee Valley Authority Sequoyah Nuclear Plant's Third Six-Month Status Report in Response to the March 12, 2012, Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)

cc (Enclosure):

NRR Director - NRC Headquarters  
NRO Director - NRC Headquarters  
NRR JPL Director - NRC Headquarters  
NRC Regional Administrator - Region II  
NRC Project Manager - Sequoyah Nuclear Plant  
NRC Senior Resident Inspector - Sequoyah Nuclear Plant

## ENCLOSURE

### TENNESSEE VALLEY AUTHORITY SEQUOYAH NUCLEAR PLANT THIRD SIX-MONTH STATUS REPORT IN RESPONSE TO THE MARCH 12, 2012, COMMISSION ORDER MODIFYING LICENSES WITH REGARD TO RELIABLE SPENT FUEL POOL INSTRUMENTATION (ORDER NUMBER EA-12-051)

#### **1 Introduction**

Sequoyah Nuclear Plant (SQN) developed an Overall Integrated Plan (Reference 1 in Section 8 of this Enclosure), documenting the requirements to install reliable spent fuel pool level instrumentation (SFPLI), in response to Reference 2. This attachment provides an update of milestone accomplishments since submittal of the second six-month status report (Reference 7), including any changes to the compliance method or schedule. This enclosure also provides a response to the request for additional information (RAI) issued by the NRC in its Interim Staff Evaluation (Reference 6).

#### **2 Milestone Accomplishments**

The following milestone(s) have been completed since the development of the second six-month status report (Reference 5), and are current as of July 31, 2014.

- 50% design impact review of Design Change Notice (DCN) 23195, for design of SFPLI, was completed on March 28, 2014

#### **3 Milestone Schedule Status**

The following updates the milestone schedule to support the Overall Integrated Plan. This section provides the activity status of each item and the expected completion date, noting any change. The dates are planning dates subject to change as design and implementation details are developed.

The milestone target completion dates do not impact the order implementation date.

Milestone	Target Completion Date as Stated in the Second Six-Month Update (Reference 7)	Activity Status	Revised Target Completion Date
Submit 60 Day Status Report	10/29/2012	Complete	
Submit Overall Integrated Plan	02/28/2013	Complete	
<b>Submit 6 Month Updates:</b>			
Update 1	08/28/2013	Complete	
Update 2	02/28/2014	Complete	
Update 3	08/28/2014	Complete	
Update 4	02/28/2015	Not Started	
Update 5	08/28/2015	Not Started	
Update 6	02/28/2016	Not Started	
Update 7	08/28/2016	Not Started	
July 17, 2013 RAI Response	08/16/2013	Complete	
NRC ISE RAI Response	06/30/2015	Started	
<b>Modifications:</b>			
Unit 1 Design Engineering	07/01/2014	In-progress	08/27/2014
Unit 1 Implementation	04/13/2015	Not Started	01/30/2015
Unit 2 Design Engineering	07/01/2014	In-progress	08/27/2014
Unit 2 Implementation	04/13/2015	Not Started	01/30/2015
<b>Procedures:</b>			
Create Procedures	10/31/2014	Not Started	
<b>Training:</b>			
Develop Training Plan	10/31/2014	Not Started	
Training Complete	04/30/2015	Not Started	04/10/2015
Full Site SFPLI Implementation	05/18/2015	Not Started	04/10/2015
Submit Completion Report	06/18/2015	Not Started	05/10/2015

#### 4 Changes to Compliance Method

There are no other changes to the compliance method as documented in the Overall Integrated Plan (Reference 1) and the first and second six-month status report (References 5 and 7).

#### 5 Need for Relief/Relaxation and Basis for the Relief/Relaxation

Sequoyah Nuclear Plant (SQN) expects to comply with the order implementation date and no relief/relaxation is required at this time.

## 6 Open Items from Overall Integrated Plan and NRC Evaluation

The following tables provide a summary of the open items documented in the Overall Integrated Plan or the NRC Evaluation and the status of each item.

Overall Integrated Plan Open Item	Status
OI-1) TVA will complete an instrument channel uncertainty calculation and document instrument channel accuracy and calibration requirements.	Engineering and vendor documentation are in progress. This will complete on the Design Engineering milestone shown in the table in Section 3.
OI-2) TVA plans to utilize Guided Wave Radar technology. Confirm final technology selection after contracts are complete.	Closed - Guided Wave Radar technology was utilized.
OI-3) Confirm that the sensor cable and light weight at the bottom of sensor cable will not damage the SFP liner from impact during seismic event.	Engineering and vendor documentation are in progress. This will complete on the Design Engineering milestone shown in the table in Section 3.
OI-4) After detailed engineering design is complete, confirm that SFP level channel components and cable routing will be contained within seismic structures such that the installation will comply with the reasonable protection guidance of NEI-12-06.	Engineering and vendor documentation are in progress. This will complete on the Design Engineering milestone shown in the table in Section 3.

NRC Evaluation Open Item	Status
None	N/A

## 7 Potential NRC Evaluation Impacts

There are no potential impacts to the NRC Evaluation identified at this time.

## 8 References

The following references support the updates to the Overall Integrated Plan described in this enclosure.

1. Letter from TVA to NRC, "Tennessee Valley Authority (TVA) - Overall Integrated Plan in Response to the March 12, 2012, Commission Order Modifying Licenses with Regard to Requirements for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051) for Sequoyah Nuclear Plant," dated February 28, 2013. (ML13063A011)
2. NRC Order Number EA-12-051, "Issuance of Order to Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation," dated March 12, 2012. (ML1254A679)

3. Letter from NRC to TVA, "Sequoyah Nuclear Plant, Units 1 and 2 - Request for Additional Information Regarding Overall Integrated plan for Reliable Spent Fuel Pool Instrumentation (Order No. EA-12-051) (TAC Nos. MF0764 and MF0765)," dated July 17, 2013. (ML13198A354)
4. Letter from TVA to NRC, "Response to NRC Request for Additional Information Regarding Overall Integrated plan for Reliable Spent Fuel Pool Instrumentation (Order No. EA-12-051) (TAC Nos. MF0764 and MF0765)," dated August 16, 2013. (ML13235A007)
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## **9. RAI Response**

On November 21, 2013, the NRC issued RAIs with its Interim Staff Evaluation (Reference 6). The NRC requested all RAI information be provided by June 30, 2015.