



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

CNL-14-030

February 28, 2014

10 CFR 2.202
10 CFR 50.4

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

Watts Bar Nuclear Plant, Unit 1
Facility Operating License No. NPF-90
NRC Docket No. 50-390

Watts Bar Nuclear Plant, Unit 2
Construction Permit No. CPPR-92
NRC Docket No. 50-391

Subject: **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 Watts Bar Nuclear Plant (TAC Nos. MF0951 and MF1178)**

- References:
1. NRC Order Number EA-12-051, "Issuance of Order Modifying 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 Watts Bar Nuclear Plant," dated February 28, 2013 (ML13063A440)
6. Letter from NRC to TVA, "Watts Bar Nuclear Station, Unit 1 and Unit 2 - Request for Additional Information Related to Overall Integrated Plan for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051) (TAC Nos. MF0951 and MF1178)," dated August 2, 2013 (ML13204A231)
7. Letter from TVA to NRC, "Tennessee Valley Authority Watts Bar Nuclear Plant's 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)," dated August 28, 2013 (ML13261A038)
8. Letter from TVA to NRC, "Response to NRC Request for Additional Information Related to Overall Integrated Plan in Response to the Commission Order Modifying Licenses with Regard to Requirements for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051) (TAC Nos. MF0951 and MF1178)," dated September 6, 2013 (ML13254A065)
9. Letter from NRC to TVA, "Watts Bar 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 No. MF0951 and MF1178)," dated October 24, 2013 (ML13275A373)
10. Letter from TVA to NRC, "Response to NRC Request for Additional Information Related to Overall Integrated Plan in Response to the Commission Order Modifying Licenses with Regard to Requirements for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051) (TAC Nos. MF0951 and MF1178)," dated November 22, 2013 (ML13333B282)
11. Letter from TVA to NRC, "Follow-up Response to NRC Request for Additional Information Related to Overall Integrated Plan in Response to the Commission Order Modifying Licenses with Regard to Requirements for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051) (TAC Nos. MF0951 and MF1178)," dated January 10, 2014 (ML14014A137)

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 Watts Bar Nuclear Plant, Units 1 and 2 overall integrated plan. On August 2, 2013, the NRC issued a request for additional information (RAI) (Reference 6) and TVA provided its response on September 6, 2013 (Reference 8).

The NRC issued its Interim Staff Evaluation and RAIs regarding TVA's overall integrated plan on November 13, 2013 (Reference 9). On November 22, 2013, TVA provided an initial response to the Reference 9 RAIs (Reference 10) and provided an additional RAI follow-up response on January 10, 2014 (Reference 11).

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 7).

The purpose of this letter is to provide the second 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 Enclosure provides an update of milestone accomplishments since submittal of the first six-month status report, including any changes to the compliance method or schedule. Response to the Reference 9 RAIs will be provided in a separate letter.

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 February 2014.

Respectfully,



J. W. Shea
Vice President, Nuclear Licensing

Enclosure
cc: See Page 4

U.S. Nuclear Regulatory Commission

Page 4

February 28, 2014

Enclosure:

Tennessee Valley Authority Watts Bar Nuclear Plant's 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)

cc (Enclosure):

NRR Director - NRC Headquarters

NRO Director - NRC Headquarters

NRC Regional Administrator - Region II

NRC Project Manager - Watts Bar Nuclear Plant, Unit 1

NRC Project Manager - Watts Bar Nuclear Plant, Unit 2

NRC Senior Resident Inspector - Watts Bar Nuclear Plant

ENCLOSURE

TENNESSEE VALLEY AUTHORITY WATTS BAR NUCLEAR PLANT'S 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)

1 Introduction

Watts Bar Nuclear Plant (WBN) 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 first six-month status report (Reference 4), including any changes to the compliance method or schedule.

2 Milestone Accomplishments

The following milestone(s) have been completed since the development of the Overall Integrated Plan (Reference 1), and are current as of January 31, 2014.

- WBN issued DCN 59683 for SFPLI on September 30, 2013

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 First Six-Month Update (Reference 3)	Activity Status	Revised Target Completion Date
Submit 60 Day Status Report	10/29/2012	Complete	
Submit Overall Integrated Plan	02/28/2013	Complete	
Submit 6 Month Updates:			
Update 1	08/28/2013	Complete	
Update 2	02/28/2014	Complete	
Update 3	08/28/2014	Not Started	
RAI Response	09/06/2013	Complete	
NRC ISE RAI Response	11/22/2013	Complete	
NRC ISE RAI 1st Follow-up Response	01/10/2014	Complete	
NRC ISE RAI 2nd Follow-up Response	03/31/2014	Started	
Modifications:			
Unit 1 Design Engineering	09/27/2013	Complete	
Unit 1 Implementation	04/08/2014 ¹	Not Started	06/30/2014
Unit 2 Design Engineering	09/27/2013	Complete	
Unit 2 Implementation	04/08/2014 ¹	Not Started	06/30/2014
Procedures:			
Create Procedures ²	06/30/2014	Not Started	
Training:			
Develop Training Plan ²	06/30/2014	Not Started	
Training Complete ²	08/31/2014	Not Started	
Full Site SFPLI Implementation	08/31/2015	Not Started	
Submit Completion Report	10/12/2014	Not Started	

- Notes: 1. In the first six-month update dated August 28, 2013 (Reference 3), the target completion dates were revised to reflect implementation of the modifications on-line for Unit 1 and prior to Unit 2 initial startup. The implementation dates are further revised as shown in the column titled "Revised Target Completion Date" above. These revised dates fall within the schedule required by NRC Order EA-12-051.
2. These milestones were not included in the February 28, 2013, Overall Integrated Plan.

4 Changes to Compliance Method

There are no other changes to the compliance method as documented in the Overall Integrated Plan (Reference 1) and Section 4 of the first six-month update (Reference 7).

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

Watts Bar Nuclear Plant (WBN) 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.	Engineering and vendor documentation are in progress. This will complete on the Design Engineering milestone shown in the table in Section 3.
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 Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051) for Watts Bar Nuclear Plant," dated February 28, 2013. (ML13063A440)
2. Letter from NRC to TVA, "Watts Bar Nuclear Station, Unit 1 and Unit 2 - Request for Additional Information Related to Overall Integrated Plan for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051) (TAC Nos. MF0951 and MF1178)," dated August 2, 2013. (ML13204A231)
3. Letter from TVA to NRC, "Tennessee Valley Authority Watts Bar Nuclear Plant's 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)," dated August 28, 2013. (ML13261A038)
4. Letter from TVA to NRC, "Response to NRC Request for Additional Information Related to Overall Integrated Plan in Response to the Commission Order Modifying Licenses with Regard to Requirements for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051) (TAC Nos. MF0951 and MF1178)," dated September 6, 2013. (ML13254A065)
5. Letter from NRC to TVA, "Watts Bar 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 No. MF0951 and MF1178)," dated October 24, 2013. (ML13275A373)
6. Letter from TVA to NRC, "Response to NRC Request for Additional Information Related to Overall Integrated Plan in Response to the Commission Order Modifying Licenses with Regard to Requirements for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051) (TAC Nos. MF0951 and MF1178)," dated November 22, 2013. (ML13333B282)
7. Letter from TVA to NRC, "Follow-up Response to NRC Request for Additional Information Related to Overall Integrated Plan in Response to the Commission Order Modifying Licenses with Regard to Requirements for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051) (TAC Nos. MF0951 and MF1178)," dated January 10, 2014. (ML14014A137)

9. RAI Response

On October 24, 2013, the NRC issued RAIs with its Interim Staff Evaluation (Reference 6). The NRC requested a response to the RAIs prior to November 22, 2014.