



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

May 11, 2012

10 CFR 50.54(f)

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

Browns Ferry Nuclear Plant, Units 1, 2, and 3
Facility Operating License Nos. DPR-33, DPR-52, and DPR-68
NRC Docket Nos. 50-259, 50-260, and 50-296

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

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: Tennessee Valley Authority (TVA) - 60-Day Response to NRC Letter, Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident; dated March 12, 2012

Reference: NRC Letter, Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident; dated March 12, 2012

On March 12, 2012, the NRC staff issued the referenced Request for Information (RFI) letter. Enclosure 5 of the RFI contains specific Requested Actions and Requested Information associated with the NRC Near-Term Task Force (NTTF) Recommendation 9.3 for Emergency Preparedness (EP) programs. In accordance with 10 CFR 50.54, "Conditions of licenses," paragraph (f), addressees were requested to submit a written response to the information requests within 90 days.

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This is TVA's consolidated response for all of its licensed operating plants (Browns Ferry Units 1, 2 and 3; Sequoyah Units 1 and 2; and Watts Bar Unit 1) as well as its plant with an active construction permit (Watts Bar 2). On May 3, 2012, TVA responded under a separate letter for its units with construction permits in deferred status (Bellefonte Units 1 and 2).

The RFI states that if an addressee cannot meet the requested response date, then the addressee must provide a response within 60 days of the date of the letter and describe the alternative course of action that it proposes to take, including the basis of the acceptability of the proposed alternative course of action and estimated completion date. After a careful review of the requested information, consideration of the ongoing actions to implement the existing EP Rule, and uncertainties related to actions associated with the March 12, 2012 NRC Order addressing NTTF Recommendation 4.2, TVA finds that it will be unable to meet the response dates requested in the RFI for NTTF Recommendation 9.3. Therefore, as provided in the RFI letter, TVA proposes to take the alternative course of action described in Enclosure 1 of this letter. The basis for this proposal is explained in Enclosure 2.

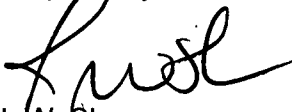
The proposed June 2015 date for the completion of the Phase 2 Staffing Assessment for the Watts Bar station (as provided in Enclosure 1) is based on the projected schedule for the second refueling outage of the operating unit, Watts Bar Unit 1. Watts Bar Unit 2 is currently under construction, and as required by the March 12, 2012 NRC Order addressing NTTF Recommendation 4.2, must implement the requirements of that Order prior to issuance of an operating license for that unit. TVA's current schedule for initial fuel loading of Watts Bar 2 is June 2015. The potential exists for TVA to improve that date. Accordingly, TVA will submit a letter to NRC by June 7, 2013, that will provide an updated status of Watts Bar completion and any impact on the committed schedule for the Phase 2 Staffing Assessment for Watt Bar.

A list of the regulatory commitments contained in this letter is provided in Enclosure 3.

If you have questions regarding our comments, please contact Fredrick Mashburn (423)751-8817.

I declare under penalty of perjury that the foregoing is true and correct.
Executed on the 11th day of May 2012.

Respectfully,



J. W. Shea
Manager, Corporate Nuclear Licensing

cc: See Page 3

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Enclosures:

- 1 - Proposed Alternative Course of Action for Responding to Recommendation 9.3
Information Request
- 2 - Basis for Proposed Alternative Course of Action for Responding to EP
Requested Information
- 3 - List of Commitments

cc: w/Enclosures

NRC Regional Administrator - Region II
NRR Director - NRC Headquarters
NRO Director - NRC Headquarters
NRC Senior Resident Inspector - Browns Ferry Nuclear Plant
NRC Senior Resident Inspector - Sequoyah Nuclear Plant
NRC Senior Resident Inspector - Watts Bar Nuclear Plant
NRR Project Manager - Bellefonte Nuclear Plant
NRR Project Manager - Browns Ferry Nuclear Plant
NRR Project Manager - Sequoyah Nuclear Plant
NRR Project Manager - Watts Bar Nuclear Plant

Enclosure 1

Proposed Alternative Course of Action for
Responding to Recommendation 9.3 Information Request

Communications

Request Number	Requested Information	Estimated Completion Date	Additional Comments (if necessary)
1	<p>Provide an assessment of the current communications systems and equipment used during an emergency event to identify any enhancements that may be needed to ensure communications are maintained during a large scale natural event meeting the conditions described [<i>in the Discussion section</i>]. The assessment should:</p> <ul style="list-style-type: none">• Identify any planned or potential improvements to existing onsite communications systems and their required normal and/or backup power supplies,• Identify any planned or potential improvements to existing offsite communications systems and their required normal and/or backup power supplies,• Provide a description of any new communications system(s) or technologies that will be deployed based upon the assumed conditions described above, and• Provide a description of how the new and/or improved systems and power supplies will be able to provide for communications during a loss of all AC power.	10/31/12	No additional comments

Enclosure 1

Proposed Alternative Course of Action for Responding to Recommendation 9.3 Information Request

Request Number	Requested Information	Estimated Completion Date	Additional Comments (if necessary)
2	Describe any interim actions that have been taken or are planned to be taken to enhance existing communications systems power supplies until the communications assessment and the resulting actions are complete.	6/11/12	No additional comments.
3	Provide an implementation schedule of the time needed to conduct and implement the results of the communications assessment.	10/31/12	The communications assessment will be conducted prior to submittal of the implementation schedule. Schedules will be provided for any actions identified by the assessment as needed to improve communications capabilities.

Enclosure 1

Proposed Alternative Course of Action for Responding to Recommendation 9.3 Information Request

Staffing

Request Number	Requested Information	Estimated Completion Date	Additional Comments (if necessary)
1	<p>Provide an assessment of the onsite and augmented staff needed to respond to a large scale natural event meeting the conditions described [<i>in the Discussion section</i>]. This assessment should include a discussion of the onsite and augmented staff available to implement the strategies as discussed in the emergency plan and/or described in plant operating procedures. The following functions are requested to be assessed:</p> <ul style="list-style-type: none"> • How onsite staff will move back-up equipment (e.g., pumps, generators) from alternate onsite storage facilities to repair locations at each reactor as described in the order regarding the NTTF Recommendation 4.2. It is requested that consideration be given to the major functional areas of NUREG-0654, Table B-1 such as plant operations and assessment of operational aspects, emergency direction and control, notification/communication, radiological accident assessment, and support of operational accident assessment, as appropriate. • New staff or functions identified as a result of the assessment. • Collateral duties (personnel not being prevented from timely performance of their assigned functions). 	<p>Phase 1 Staffing Assessment - 4/30/2013</p> <p>Phase 2 Staffing Assessment</p> <p>Browns Ferry 1/4/2015</p> <p>Sequoyah 11/2/2014</p> <p>Watts Bar 6/5/2015</p>	<p>Phase 1 Staffing Assessment - Onsite and augmented staffing assessment considering all requested functions except those related to NTTF Recommendation 4.2.</p> <p>Phase 2 Staffing Assessment - Onsite and augmented staffing assessment considering functions related to NTTF Recommendation 4.2.</p> <p>The estimated completion dates for the Phase 2 Staffing Assessments reflect TVA's current forecasts for refueling outages. The dates are 4 months before the scheduled start of the earliest second refueling outage for any unit on the respective site after submittal of implementation plans on February 28, 2013, as used within the context of NRC Order EA-12-049. Should the refueling outage schedules change, these dates may change accordingly.</p>

Enclosure 1

Proposed Alternative Course of Action for
Responding to Recommendation 9.3 Information Request

Request Number	Requested Information	Estimated Completion Date	Additional Comments (if necessary)
2	Provide an implementation schedule of the time needed to conduct the onsite and augmented staffing assessment. If any modifications are determined to be appropriate, please include in the schedule the time to implement the changes.	<p>Implementation schedule for Phase 1 Staffing Assessment - 4/30/13</p> <p>Implementation schedule for Phase 2 Staffing Assessment</p> <p>Browns Ferry 1/4/2015</p> <p>Sequoyah 11/2/2014</p> <p>Watts Bar 6/5/2015</p>	<p>Phase 1 Staffing Assessment - Onsite and augmented staffing assessment considering all requested functions except those related to NTTF Recommendation 4.2.</p> <p>Phase 2 Staffing Assessment - Onsite and augmented staffing assessment considering functions related to NTTF Recommendation 4.2.</p> <p>The estimated completion dates for the Phase 2 Staffing Assessments reflect TVA's current forecasts for refueling outages. The dates are 4 months before the scheduled start of the earliest second refueling outage for any unit on the respective site after submittal of implementation plans on February 28, 2013, as used within the context of NRC Order EA-12-049. Should the refueling outage schedules change, these dates may change accordingly.</p>

Enclosure 1

**Proposed Alternative Course of Action for
Responding to Recommendation 9.3 Information Request**

Request Number	Requested Information	Estimated Completion Date	Additional Comments (if necessary)
3	Identify how the augmented staff would be notified given degraded communications capabilities.	6/11/2012	No additional comments.
4	Identify the methods of access (e.g., roadways, navigable bodies of water and dockage, airlift, etc.) to the site that are expected to be available after a widespread large scale natural event.	6/11/2012	No additional comments.
5	Identify any interim actions that have been taken or are planned prior to the completion of the staffing assessment.	6/11/2012	No additional comments.

Enclosure 1

Proposed Alternative Course of Action for
Responding to Recommendation 9.3 Information Request

Request Number	Requested Information	Estimated Completion Date	Additional Comments (if necessary)
6	Identify changes that have been made or will be made to your emergency plan regarding the on-shift or augmented staffing changes necessary to respond to a loss of all AC power, multi-unit event, including any new or revised agreements with offsite resource providers (e.g., staffing, equipment, transportation, etc.).	<p>Changes associated with Phase 1 Staffing Assessment 4/30/13</p> <p>Changes associated with Phase 2 Staffing Assessment Browns Ferry 1/4/2015</p> <p>Sequoyah 11/2/2014</p> <p>Watts Bar 6/5/2015</p>	<p>Phase 1 Staffing Assessment - Onsite and augmented staffing assessment considering all requested functions except those related to NTTF Recommendation 4.2.</p> <p>Phase 2 Staffing Assessment - Onsite and augmented staffing assessment considering functions related to NTTF Recommendation 4.2.</p> <p>The estimated completion dates for the Phase 2 Staffing Assessments reflect TVA's current forecasts for refueling outages. The dates are 4 months before the scheduled start of the earliest second refueling outage for any unit on the respective site after submittal of implementation plans on February 28, 2013, as used within the context of NRC Order EA-12-049. Should the refueling outage schedules change, these dates may change accordingly.</p>

Enclosure 2
 Basis for Proposed Alternative Course of Action for
 Responding to Emergency Planning Requested Information

Communications

There are two separate responses to the information requests related to communications. The later timing of responses to requests numbers 1 and 3 reflects the higher Staff priority placed upon the completion of licensee actions necessary to comply with the EP Rule promulgated in Federal Register Volume 76, Number 226; dated November 23, 2011; Pages 72560-72600. The proposed timing is warranted as many of the licensee staff resources necessary for performing the communications assessment are the same resources involved in implementing new EP Rule requirements and maintaining existing EP communications equipment.

In addition, the estimated completion date assigned to information request number 3 will promote alignment between the out-year budgeting/funding of future enhancements, and the development of an accurate and complete enhancement implementation schedule.

Staffing

As presented in Enclosure 1 of this letter, a 2-phase approach will be used to respond to the information requests associated with Staffing. The table below summarizes this approach.

Plant Type	Phase 1 Staffing Assessment (for functions except those related to NTF Recommendation 4.2)	Phase 2 Staffing Assessment (for functions related to NTF Recommendation 4.2)
Single-unit plants	Perform staffing assessment and implement actions as required by recent EP Rule using Interim Staff Guidance (ISG) and Nuclear Energy Institute (NEI) 10-05	Perform staffing assessment as requested by 50.54(f) letter using NEI 12-01; provide results in accordance with Enclosure 1 of this letter
Multi-unit plants	<ul style="list-style-type: none"> • Perform staffing assessment and implement actions as required by recent EP Rule using ISG and NEI 10-05 • Perform staffing assessment as requested by 50.54(f) letter using NEI 12-01 and material from NEI 10-05; provide results in accordance with Enclosure 1 of this letter 	Perform staffing assessment as requested by 50.54(f) letter using NEI 12-01; provide results in accordance with Enclosure 1 of this letter

Enclosure 2
Basis for Proposed Alternative Course of Action for
Responding to Emergency Planning Requested Information

The basis for this approach is discussed below.

- For multi-unit plants, the Phase 1 staffing assessment will be performed by March 31, 2013, and submitted to NRC by April 30, 2013. This assessment will consider all requested functions except those related to Fukushima Near-Term Task Force (NTTF) Recommendation 4.2. An assessment considering functions related to NTTF Recommendation 4.2 will be performed in Phase 2.

The timing of the Phase 1 staffing assessment reflects the higher Staff priority placed by the staff, and approved by the Commission in SRM-SECY-12-0025 upon the completion of licensee actions necessary to comply with the EP Rule promulgated in Federal Register Volume 76, Number 226; dated November 23, 2011; Pages 72560-72600. In particular, Section IV.A.9 of 10 CFR 50, Appendix E, requires that licensees complete a detailed analysis demonstrating that on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the emergency plan. As stated in the EP Rule, this analysis must be completed by December 24, 2012.

Following completion of EP Rule staffing analysis, the staffing assessment associated with the Letter will be performed. Based on staffing analysis experience to date, it is anticipated that a multi-unit staffing analysis will require approximately 3 months to complete and validate. One additional month is allotted for processing of an assessment submittal package.

As requested, an implementation schedule for any modifications that are determined to be appropriate will be included with the Phase 1 staffing assessment.

Single-unit plants do not need to provide a Phase 1 staffing assessment in response to the 50.54(f) letter as performance of this activity is governed by the recent EP Rule and existing license requirements.

The Phase 2 staffing assessment will be provided for each TVA site by four (4) months prior to beginning the earliest second refueling outage for any unit on that respective site after submittal of implementation plans on February 28, 2013, as used within the context of NRC Order EA-12-049. This assessment will consider the requested functions related to Fukushima Near-Term Task Force (NTTF) Recommendation 4.2.

The industry will be responding to multiple regulatory actions resulting from the recommendations contained in the Fukushima NTTF Report, as modified in related Commission Papers (SECY's) and Staff Requirements Memoranda (SRM). One of these actions, in particular, has the potential to impact emergency response staffing levels. This action is associated with Fukushima NTTF Recommendation 4.2 and subsequently issued as NRC Order to Modifying Licenses with Regard to Requirements for Mitigation Strategies for

Enclosure 2
Basis for Proposed Alternative Course of Action for
Responding to Emergency Planning Requested Information

Beyond-Design-Basis External Events EA-12-049 [the Order]. A summary of the Order is provided below.

This Order requires a three-phase approach for mitigating beyond-design-basis external events. The initial phase requires the use of installed equipment and resources to maintain or restore core cooling, containment and spent fuel pool (SFP) cooling. The transition phase requires providing sufficient, portable, onsite equipment and consumables to maintain or restore these functions until they can be accomplished with resources brought from off site. The final phase requires obtaining sufficient offsite resources to sustain those functions indefinitely.

Additional details on an acceptable approach for complying with this Order will be contained in final Interim Staff Guidance (ISG) scheduled to be issued by the NRC in August 2012.

In response to the Order, each licensee must develop new strategies for mitigating beyond-design-basis external events. To ensure accurate results, the staffing assessment for response functions related to NTTF Recommendation 4.2 must be based upon the actions delineated in procedures and guidelines developed in response to the Order. Once the site-specific actions associated with the new response strategies are defined (e.g., down to the procedure or guideline step level), then the staffing needed to perform these actions can be assessed with the necessary level of accuracy.

Based on a review of the planned actions necessary to comply with the Order, an assessment of the staffing for the functions related to NTTF Recommendation 4.2 will be provided by 4 months prior to beginning of the second refueling outage (as used within the context of NRC Order EA-12-049). TVA will provide three (3) phase 2 staffing assessments. Each assessment will be provided by a date that correlates to 4 months prior to the occurrence of the second refueling outage of the unit to which the assessment is applicable. The current projected dates for each site's phase 2 staffing assessment (based on current refueling outage projections) are provided in Enclosure 1 to this letter

As requested, an implementation schedule for any modifications that are determined to be appropriate will be included with the Phase 2 staffing assessment.

The Phase 2 staffing assessment is one component of an overall licensee work plan necessary to implement the requirements of Order EA-12-049. As stated in the Order, TVA will complete full implementation of the Order no later than two (2) refueling cycles after submittal of the overall integrated plan, as required in Condition C.1.a, or December 31, 2016, whichever comes first. Full implementation includes completion of actions related to response assignments, staffing changes, issuance of new or revised procedures or guidelines, and training.

Enclosure 3
List of Commitments

1. TVA will provide the information in Requested Information Item 2 for the Communications Assessment (page 2 of the Communications section of Enclosure 5 of the letter) and Requested Information Items 3, 4 and 5 of the Staffing Assessment (page 3 of the Staffing section of Enclosure 5) by June 11, 2012.
2. TVA will provide the information in Requested Information Items 1 and 3 for the Communication Assessment (page 2 of the Communications section of Enclosure 5 of the letter) by October 31, 2012.
3. TVA will provide the information for Phase 1 (addressing the functions except those related to NTTF Recommendation 4.2) for Requested Information Items 1, 2, and 6 of the Staffing Assessment (pages 2 and 3 of the Staffing section of Enclosure 5 of the letter) by April 30, 2013.
4. TVA will provide the information for Phase 2 (addressing all functions including consideration of the results of NTTF Recommendation 4.2) for Requested Information Items 1, 2, and 6 of the Staffing Assessment (pages 2 and 3 of the Staffing section of Enclosure 5 to the letter) by dates that are four months before the earliest second refueling outage at each TVA operating site (Browns Ferry, Sequoyah, and Watts Bar) after the February 28, 2013, submittal of the Implementation Plans as required by NRC Order EA-12-049). [The projected dates, as based on the current forecast dates for those refueling outages, are provided in the tables in Enclosure 1 of this letter.]
5. TVA will provide an updated status of the completion schedule for the Phase 2 Staffing Assessment for Watts Bar specifically identifying any potential impact its completion resulting from the schedule of completion of Watts Bar Unit 2, by June 7, 2013.