



Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381-2000

WBL-19-046

October 3, 2019

10 CFR 50.4

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

Watts Bar Nuclear Plant, Units 1 and 2
Facility Operating License Nos. NPF-90 and NPF-96
NRC Docket Nos. 50-390 and 50-391

Subject: **Notification of Readiness for NRC Independent Review to Confirm Chilling Effect Letter and Cross-Cutting Issue Closure Criteria Have Been Met**

References: 1. NRC letter to TVA, "Chilled Work Environment for Raising and Addressing Safety Concerns at the Watts Bar Nuclear Plant," (EA-16-061) dated March 23, 2016

2. NRC letter to TVA, "Assessment Followup letter and Updated Inspection Plan for Watts Bar Nuclear Plant Units 1 and 2 (Reports 05000390, 05000391/2018005)" dated August 31, 2018

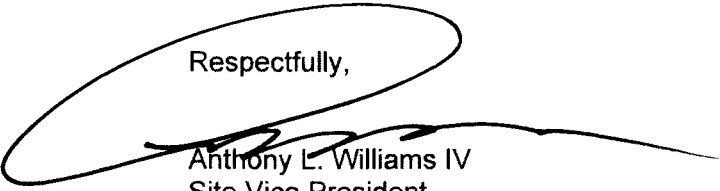
The purpose of this letter is to notify the Nuclear Regulatory Commission (NRC) that Tennessee Valley Authority (TVA) is ready for the NRC to conduct a follow-up inspection at Watts Bar Nuclear Plant (WBN) to review actions taken to address the Chilling Effect Letter (CEL) issues identified in Reference 1 and the Safety Conscious Work Environment (SCWE) Cross-Cutting Issue (CCI) identified in Reference 2. As described in the Enclosure, TVA has made reasonable progress in addressing the specific closure criteria for the CEL and CCI closure criteria listed in Reference 2. In particular, TVA has taken steps to address the chilled work environment in the Radiation Protection (RP) department and address the root causes that allowed chilled work environments to develop at WBN.

Based on discussions with NRC staff, TVA requests the NRC to commence its independent review on October 21, 2019, to confirm that the CEL and CCI closure criteria in Reference 2 have been met.

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There are no new regulatory commitments in this letter. If you have any questions concerning this matter, please contact Tony Brown, WBN Licensing Manager, at (423) 365-7720.

Respectfully,



Anthony L. Williams IV
Site Vice President
Watts Bar Nuclear Plant

Enclosure:

Tennessee Valley Authority Actions to Address the Watts Bar Nuclear Plant Chilling Effect Letter and Safety Conscious Work Environment Cross-Cutting Issue Closure Criteria

cc (Enclosure):

NRC Regional Administrator - Region II
NRC Senior Resident Inspector - Watts Bar Nuclear Plant

Enclosure

Tennessee Valley Authority Actions to Address the Watts Bar Nuclear Plant Chilling Effect Letter and Safety Conscious Work Environment Cross-Cutting Issue Closure Criteria

The Tennessee Valley Authority (TVA) nuclear safety culture vision is to embrace our personal responsibility for sustaining nuclear safety excellence and, through our actions, demonstrate an uncompromising commitment to nuclear safety as an overarching priority. In our pursuit of excellence, we expect to see no reluctance to raising nuclear safety concerns because it is the right thing to do and essential to achieving sustained excellence. The development of a chilled work environment (CWE) first in the Watts Bar Nuclear Plant (WBN) Operations department and then in the WBN Radiation Protection (RP) department did not meet our nuclear safety culture vision and as a result, we have taken extensive corrective actions to address these issues. Our corrective actions have been effective as independent and internal nuclear safety culture evaluations and monitoring efforts have demonstrated that the safety conscious work environment (SCWE) improvements in the Operations department have been sustained and significant improvement in the SCWE in the RP department has occurred since the identification of the RP CWE in June 2018. TVA has addressed the Chilling Effects Letter (CEL) and SCWE Cross-Cutting Issue (CCI) closure criteria as documented below.

1. Demonstration of improvement in SCWE, with particular emphasis on improvement in the Radiation Protection department and sustained improvement in the Operations department.

The initial corrective actions implemented by TVA in response to the identification of the RP department CWE and the SCWE CCI included completion of investigations to review employee conduct issues and a Root Cause Analysis (RCA) to identify the root and contributing causes for the RP CWE and the SCWE CCI. The investigations and RCA were conducted by external personnel with experience commensurate with their assignments. TVA implemented and completed extensive corrective actions to address the findings of the investigations and the RCA. The final effectiveness review for the RCA concluded that there has been substantial improvement in the RP department SCWE and sustained improvement in the Operations department SCWE.

TVA has implemented a tiered approach to safety culture monitoring which closely follows guidance in NEI 09-07, Revision 1, "Fostering a Healthy Nuclear Safety Culture." Corrective actions implemented as part of the RP CWE RCA have significantly improved our ability to identify and evaluate department-specific work environment trends. As a result, we are taking actions to address general work environment (GWE) issues before they can develop into a chilling effect and/or a CWE. Addressing issues at a low level has resulted in an overall improvement in the SCWE at WBN and this has been confirmed by the Oak Ridge Associated Universities (ORAU) Nuclear Safety Culture Evaluation results (see below) and the improved ratings in the Nuclear Safety Culture Trait, Environment for Raising Concerns, by the WBN Nuclear Safety Culture Monitoring Panel (NSCMP) and the Site Leadership Team (SLT).

ORAU recently conducted an independent evaluation of safety culture perceptions and attitudes at WBN and provided its report to TVA in September 2019. The evaluation included administering a safety culture survey, conducting focus group discussions with members of the workforce, and conducting interviews with site management. The results of

the 2019 WBN safety culture evaluation confirmed our nuclear safety culture monitoring results and show that the WBN safety culture has shown some improvement when compared to the results of the 2017 evaluation and that the WBN safety culture is trending in the right direction. Results indicate that perceptions of retaliation for reporting safety concerns have improved, and no differences were found in fears of retaliation based on department, age, or gender. Results from interviews with management indicated that leadership was optimistic about improvements in the work environment that they felt were due to managerial changes, such as the improved management presence in work areas. Results from focus groups indicated that employees felt comfortable raising safety concerns. However, some said they remain hesitant due to a perceived lack of problem resolution, not a fear of retaliation. ORAU provided TVA with recommendations to continue safety culture improvements at WBN. TVA has initiated condition reports to capture these recommendations and will take appropriate actions to continuously improve the WBN nuclear safety culture.

TVA management has continued to emphasize to employees that they are free to raise concerns and our employees continue to freely use our preferred method for raising concerns – the Corrective Action Program. Our management has also emphasized that if necessary, alternate means are available to report concerns, such as through anonymous condition reports, the Employee Concerns Program, and the NRC. The rate of allegations provided to NRC from onsite sources has remained relatively stable this year as compared to 2018. It is recognized that WBN is an outlier in NRC allegations as compared to the industry and continue to implement actions to improve problem resolution and encourage employees to feel comfortable raising concerns using on site avenues for raising concerns. However, we are careful to ensure employees feel free to raise concerns to the NRC.

TVA has recently restructured its Employee Concerns Program in order to improve the effectiveness of alternative processes for raising concerns. Our initial assessment is that there has been no impact from this change on employee's willingness to raise concerns or to use the Employee Concerns Program as an alternate process for raising concerns. We plan to evaluate the effectiveness of the Employee Concerns Program once the new program has sufficient run time.

TVA is also implementing the Adverse Employee Action procedure as required by Confirmatory Orders EA-09-009, EA-09-203, and EA-17-022. This procedure is effective in ensuring independent management review of proposed adverse actions to determine whether the proposed action comports with employee protection regulations, and whether the proposed actions could negatively impact the SCWE. Mitigation plans are developed as necessary and the impact of the plans is measured to determine whether additional SCWE mitigation actions are necessary.

2. Demonstration of identifying the causes of the weaknesses in the station's ability to 1) detect declining trends in safety culture and SCWE, particularly at the department level, and 2) take action to mitigate CWEs, and
3. Development of corrective actions to address identified weaknesses from item 2, documentation of progress in implementing actions, and demonstration of effectiveness of actions.

To address closure criteria 2 and 3, the RP CWE RCA identified the following direct, root, and contributing causes with the associated corrective actions:

- Direct Cause: Some RP Superintendents and Supervisors did not have the leadership courage and skills to act upon behaviors contrary to TVA's Code of Conduct.

Corrective actions: 1) validating the implementation of the confidential recommendations for disciplinary action as identified in the January 2019 Watts Bar Review Team Report, 2) establishment of specific Individual Development Plans (IDPs) with Performance Review Document (PRD) goals to address leadership courage and skills for RP supervisors/superintendents based on a leadership assessment and input from the new RP Manager on observed performance, 3) establishment and implementation of a RP recovery plan, and 4) providing support for the new RP manager.

- Root Cause 1 - The RP Manager failed to recognize the impact on the work environment of a directive management style that overly focused on accountability and strong execution over maintaining a professional and healthy General Work Environment (GWE).
- Root Cause 2 - A systematic method did not exist that aggregates General Work Environment and CWE data, at both the station and department level, to support rigorous review, the directing of actions, and follow-up activities

Corrective Action Preclude Repetition (CAPR) to address both Root Cause 1 and Root Cause 2: Revise NPG-SPP-01.7.2 (Nuclear Safety Culture Monitoring) to include a tool/matrix (EITM) that aggregates GWE/CWE data at both the station and department specific level, and process controls for the review of the tool/matrix to support proactively assessing and acting upon GWE/CWE issues.

- Contributing Cause 1: Radiation Protection Management did not follow the Nuclear Safety Culture Monitoring Panel procedure and report out on department specific Safety Conscious Work Environment issues.

Corrective actions include management reinforcement of expectations for procedure adherence related to Nuclear Safety Culture Monitoring Panel (NSCMP) with involved personnel.

- Contributing Cause 2: The WBN Employee Concerns Program (ECP) has not been effective in its primary roles and responsibilities to assist and support management in ensuring that all employees are free to raise concerns, have an alternate avenue for raising concerns, and the effective resolution of concerns.

Initial corrective actions: 1) reviewing ECP roles and responsibilities and implementing improvements to better respond to employee concerns and eliminate negative perceptions of the ECP, 2) establishment and implementation of an ECP improvement plan, and 3) improving the ECP protocols for releasing information necessary to understand concerns while maintaining the confidentiality of those raising concerns.

Subsequent to issuance of the RCA, in response to significant regulatory and personnel feedback, TVA restructured the Employee Concerns Program. A new Conduct of Operations was implemented and different skill sets were required for Employee Concerns representatives. The effectiveness of the restructuring will be evaluated after sufficient run time.

- Contributing Cause 3: The Senior Leadership Team was not intrusive enough in understanding and acting upon 1) the GWE issues at the department level, 2) the NRC criteria for a CWE, 3) the potential for GWE issues to result in a CWE, 4) the bases for conclusions in independent assessments indicating a SCWE or CWE did not exist, 5) the information presented to the site through all avenues (e.g., anonymous CR's, allegations, and external assessments), and assessment recommendations.

Corrective actions include 1) training on the RCA as operating experience to institutionalize and reinforce the learnings, 2) a Vice President and Plant Manager briefing to department managers and direct reports on the key lessons in the RP department that created and allowed a CWE to exist and station leaders not proactively identifying and acting upon the CWE, and 3) establishing a set of key SCWE metrics across the avenues for reporting concerns.

TVA has completed the cause to action matrix in the RP CWE RCA. The final effectiveness review for the RCA actions concluded that implementation of the corrective actions associated with the causes identified in the RP CWE RCA has resulted in substantial improvement in TVA's ability to detect declining trends in safety culture and SCWE, particularly at the department level, and that actions taken to mitigate the RP department CWE have been effective. This conclusion was based on a holistic evaluation of the safety culture at WBN using success criteria established in the RCA. In particular, improvement in the WBN SCWE is demonstrated by the results of the ORAU nuclear safety culture survey, the NSCMP rating of the WBN Environment for Raising Concerns, and the Site Leadership Team determining that the RP department chilled work environment has been effectively mitigated.

WBN management is routinely monitoring the inputs to the EITM and is taking actions as necessary to mitigate SCWE issues before they develop into department or site wide chilling effect issues. Each month, a cognitive review of the EITM is conducted by the Plant Support Director and results are communicated to the Nuclear Safety Culture Peer Team and Site Leadership Team as necessary.