



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
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February 17, 2021

EA-16-061

Mr. Jim Barstow
Vice President, Nuclear Regulatory
Affairs & Support Services
Tennessee Valley Authority
1101 Market Street, LP 4A-C
Chattanooga, TN 37402-2801

SUBJECT: CLOSURE OF CHILLING EFFECT LETTER – CHILLED WORK
ENVIRONMENT FOR RAISING AND ADDRESSING SAFETY CONCERNS AT
THE WATTS BAR NUCLEAR PLANT

Dear Mr. Barstow:

The purpose of this letter is to inform you of the Nuclear Regulatory Commission's (NRC's) decision to close the March 23, 2016, Chilling Effect Letter (CEL), which focused on the work environment at Tennessee Valley Authority's (TVA's) Watts Bar Nuclear Plant (WBN). This decision is based on the NRC's determination that TVA has satisfied the CEL closure criteria identified in the NRC's August 31, 2018, Assessment Follow-up Letter (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18242A458). The decision to close the subject CEL has no bearing on the Confirmatory Orders (COs) issued to TVA in 2009 (ADAMS Accession No. ML093510993) and 2017 (ADAMS Accession No. ML17208A647), which resulted from violations of employee protection requirements. The NRC continues to evaluate the safety culture at all three TVA sites through the reactor oversight process.

The remainder of this letter provides additional details of the NRC's bases for closing the CEL.

Background

On March 23, 2016, the NRC issued a CEL (ADAMS Accession No. ML16083A479) regarding chilled work environment issues at WBN. This letter was issued after the NRC concluded that a chilled work environment existed in the operations department, as indicated by a perception among operators that they were not free to raise safety concerns without fear of retaliation.

On April 22, 2016, TVA provided a response to the CEL, which included a description of the immediate actions taken and the corrective actions planned to address the chilled work environment (ADAMS Accession No. ML16113A228). On April 12, 2017, TVA provided an update on the status of the corrective actions (ADAMS Accession No. ML17102B658).

In 2018, as a result of an increase in allegations received from Watts Bar personnel, the NRC performed a safety conscious work environment (SCWE) follow-up inspection at WBN and determined that a chilled work environment existed in the radiation protection (RP) department. Due to the chilled work environment identified in the RP department and concerns related to the identification and evaluation of department-specific work environment trends, the NRC concluded that the 2016 CEL could not be closed. In an Assessment Follow-up Letter dated

August 31, 2018, (ADAMS Accession No. ML18242A458), the NRC informed TVA that, due to the amount of time the CEL had remained open, the NRC opened a SCWE cross-cutting issue (CCI). That letter went on to define common criteria for closing both the CEL and the CCI. Since the issuance of the CEL and CCI, TVA has made multiple organizational changes that have resulted in an improved safety culture.

NRC Activities Supporting CEL Closure

During the period from 2016 to the present, the NRC staff reviewed TVA's corrective actions to address the work environment issues at WBN. These reviews took the form of inspections, interviews with plant staff, and assessments of allegations received from WBN personnel.

Beginning in late 2016, the NRC staff performed inspections at WBN to review TVA's root cause analyses, completed corrective actions, compliance with the 2009 and 2017 COs, metrics and measures TVA implemented to monitor progress, and the results of independent safety culture surveys and assessments performed in 2017 and 2019. These inspections included SCWE follow-up inspections in December 2016, February 2018, June 2018, January 2019, and October 2019. The NRC also performed additional safety culture inspections in June 2020 and October 2020.

The dedicated SCWE inspections that occurred from 2018 to 2020 involved interviews of over 290 employees and over 680 hours of direct inspection. This effort was supplemented by resident inspector presence which included daily monitoring and periodic validation of SCWE inspection results. During the inspections that occurred in 2018 to 2020, WBN employees interviewed indicated that they felt free to raise safety concerns through multiple avenues (e.g., discussions with management, corrective action program (CAP), Employee Concerns Program (ECP), or directly to NRC). In addition, the NRC has observed improvement in ECP investigations of concerns, pulsing survey results, safety culture assessments, nuclear safety culture monitoring panel processes, and other methods used to monitor safety culture and SCWE. The NRC has determined that TVA's corrective actions to address the identified safety culture issues were adequate, and the NRC has also noted a steady downward trend in allegations from WBN since the SCWE CCI was issued.

NRC's Decision to Close the CEL

Based on the results of the inspections listed above, the NRC determined that the closure criteria established in the Watts Bar Annual Assessment Follow-Up Letter dated August 31, 2018, are met. Specifically, in evaluating the scope of efforts and progress in addressing these issues, the NRC determined that TVA recognized the issues and has effectively implemented a range of corrective actions. Further, the NRC concluded that TVA's actions, are adequate to address the underlying issues that led to the issuance of the CEL. These actions included implementation of new programs such as the nuclear safety culture monitoring panel, employee issue tracking matrix, and ECP pulsing surveys which improved the safety conscious work environment at WBN. Therefore, the NRC considers the CEL dated March 23, 2016, to be closed. In addition, the NRC will recommend closure of the CCI through the annual assessment process. Notwithstanding this conclusion, the NRC will continue to monitor TVA's activities to maintain a safety conscious work environment at WBN through the Reactor Oversight Process.

This letter and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

Laura A. Dudes
Regional Administrator

Docket Nos. 05000390 and 05000391
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