



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION II

245 PEACHTREE CENTER AVENUE NE, SUITE 1200  
ATLANTA, GEORGIA 30303-1257

March 10, 2017

EA-17-022

Mr. Joseph W. Shea  
Vice President, Nuclear Licensing  
Tennessee Valley Authority  
1101 Market Street, LP 3D-C  
Chattanooga, TN 37402-2801

**SUBJECT: WATTS BAR NUCLEAR PLANT – NRC PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION (PART 2); AND SAFETY CONSCIOUS WORK ENVIRONMENT ISSUE OF CONCERN FOLLOW-UP; NRC INSPECTION REPORT 05000390/2016013, 05000391/2016013**

Dear Mr. Shea:

On December 1, 2016, the U. S. Nuclear Regulatory Commission (NRC) completed Part 2 of a Problem Identification and Resolution inspection at your Watts Bar Nuclear Plant Units 1 and 2. On November 17, 2016, December 1, 2016, January 11, 2017, and February 21, 2017, the NRC inspection team discussed the results of this inspection with Mr. Paul Simmons and other members of your staff. The results of this inspection are documented in the enclosed report. Additionally, security related activities are documented in inspection report 05000390 & 391/2016404 (ML17008A001). Results of the first part of the inspection are documented in Inspection Report 05000390 & 391/2016007(ML16300A409).

The NRC inspection team reviewed the station's corrective action program and its implementation to evaluate its effectiveness in identifying, prioritizing, evaluating, and correcting problems, and to confirm that the station was complying with NRC regulations and licensee standards for corrective action programs. The team identified weaknesses in the elements of Problem Identification; and Problem Prioritizing and Evaluation. One finding was identified in the area of Corrective Action Program Effectiveness.

Based on the results of this inspection, one apparent violation (AV) was identified and is being considered for escalated enforcement action in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. The apparent violation involves Tennessee Valley Authority's (TVA's) failure to comply with a Confirmatory Order (CO) Modifying License, (EA-09-009,203) (ML093510993) issued by the NRC on December 22, 2009. The CO required all TVA nuclear plants to implement actions, including reviewing processes to determine whether adverse employment actions comport with employee protection regulations, and to determine whether the proposed adverse actions could negatively impact the Safety Conscious Work Environment (SCWE). The NRC's recent Problem Identification and Resolution team inspection, completed in December 2016, identified that TVA's Watts Bar Nuclear (WBN) facility was not implementing certain review processes required in the CO in accordance with an

implementing procedure, from November 2014 to August 2016. The details of the AV are fully described in the enclosed inspection report.

The team also evaluated the station's processes for use of industry and NRC operating experience information and the effectiveness of the station's audits and self-assessments. Based on the samples reviewed, the team determined that your staff's performance in each of these areas adequately supported nuclear safety.

Finally the team reviewed the station's programs to establish and maintain a safety-conscious work environment, and interviewed station personnel to evaluate the effectiveness of these programs. In a letter dated March 23, 2016, the NRC issued a Chilling Effect Letter (CEL) entitled, "Chilled Work Environment for Raising and Addressing Safety Concerns at the Watts Bar Nuclear Plant," (ML16083A479). The NRC determined there was sufficient evidence to support the existence of an environment within the Operations department where your employees did not feel free to raise safety concerns to management because they feared retaliation and did not feel that their concerns were being addressed. As a follow-up to the issuance of the CEL, this inspection continued the focused assessment of the SCWE documented in part 1 of the inspection. The staff evaluated the attributes of a SCWE as described in inspection procedure (IP) 93100, "Safety Conscious Work Environment Issue of Concern Follow-up." IP 93100 identifies a SCWE as an environment in which employees are encouraged to raise safety concerns, are free to raise concerns both to their own management and to the NRC without fear of retaliation, where concerns are promptly reviewed, given the proper priority, appropriately resolved, and timely feedback is provided to those raising concerns.

The inspection team conducted focus groups and interviews with members of the Watts Bar staff and key management. A total of 28 employees participated in the focus groups and interviews. The information from the focus groups, interviews, and document reviews were organized into the themes that are discussed in the attached report. The team made the following key observations associated with the current work environment, which are explained in more detail in the report. All employees interviewed during Part 2 of the inspection indicated that they were willing to raise nuclear safety concerns and felt free to raise concerns to their direct supervisors without fear of retaliation. However, the insights provided by employees confirmed that there were site-wide challenges to the SCWE at WBN, and some of the conditions that prompted the issuance of the CEL extended beyond the Operations department. The team identified weaknesses in the documentation and tracking of corrective actions to improve the SCWE in departments outside of Operations. There were also weaknesses in the criteria used to evaluate nuclear safety culture standards, which likely contributed to the missed opportunities to identify and address safety culture concerns prior to the development of the chilled work environment.

Before the NRC makes its enforcement decision, we are providing you an opportunity to (1) respond to the apparent violation addressed in this inspection report within 30 days of the date of this letter, (2) request a Pre-decisional Enforcement Conference (PEC), or (3) request Alternative Dispute Resolution (ADR). If a PEC is held, it will be open for public observation and the NRC will issue a press release to announce the time and date of the conference. If you decide to participate in a PEC or pursue ADR, please contact Alan Blamey at 404-997-4415 within 10 days of the date of this letter. A PEC should be held within 30 days and an ADR session within 45 days of the date of this letter.

If you choose to provide a written response, it should be clearly marked as a "Response to An Apparent Violation in NRC Inspection Report (05000390/2016013 & 05000391/2016013); EA-17-022," and should include for the apparent violation: (1) the reason for the apparent violation or, if contested, the basis for disputing the apparent violation; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken; and (4) the date when full compliance will be achieved. Your response may reference or include previously docketed correspondence, if the correspondence adequately addresses the required response. Additionally, your response should be sent to the NRC's Document Control Center, with a copy mailed to Joel T. Munday, Director, Division of Reactor Projects, Region II, 245 Peachtree Center Avenue, NE, Suite 1200, Atlanta, GA 30303-1257, within 30 days of the date of this letter. If an adequate response is not received within the time specified or an extension of time has not been granted by the NRC, the NRC will proceed with its enforcement decision or schedule a PEC.

If you choose to request a PEC, the conference will afford you the opportunity to provide your perspective on these matters and any other information that you believe the NRC should take into consideration before making an enforcement decision. The decision to hold a predecisional enforcement conference does not mean that the NRC has determined that a violation has occurred or that enforcement action will be taken. This conference would be conducted to obtain information to assist the NRC in making an enforcement decision. The topics discussed during the conference may include information to determine whether a violation occurred, information to determine the significance of a violation, information related to the identification of a violation, and information related to any corrective actions taken or planned.

In lieu of a PEC, you may also request ADR with the NRC in an attempt to resolve this issue. ADR is a general term encompassing various techniques for resolving conflicts using a third party neutral. The technique that the NRC has decided to employ is mediation. Mediation is a voluntary, informal process in which a trained neutral (the "mediator") works with parties to help them reach resolution. If the parties agree to use ADR, they select a mutually agreeable neutral mediator who has no stake in the outcome and no power to make decisions. Mediation gives parties an opportunity to discuss issues, clear up misunderstandings, be creative, find areas of agreement, and reach a final resolution of the issues. Additional information concerning the NRC's program can be obtained at <http://www.nrc.gov/about-nrc/regulatory/enforcement/adr.html>. The Institute on Conflict Resolution (ICR) at Cornell University has agreed to facilitate the NRC's program as a neutral third party. Please contact ICR at 877-733-9415 within 10 days of the date of this letter if you are interested in pursuing resolution of this issue through ADR.

In addition, please be advised that the number and characterization of the apparent violation described in the enclosed inspection report may change as a result of further NRC review. You will be advised by separate correspondence of the results of our deliberations on this matter.

NRC inspectors also documented one NRC-identified finding of very low safety significance (Green or SL-IV) that did not involve a violation of NRC requirements. Additionally, NRC inspectors documented one Severity Level IV violation with no associated finding. Further, inspectors documented one licensee-identified violation which was determined to be of very low safety significance in this report. The NRC is treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2.a of the Enforcement Policy.

If you contest the violations or significance of these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement; and the NRC resident inspector at the Watts Bar Plant.

If you disagree with a cross-cutting aspect assignment or a finding not associated with a regulatory requirement in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC, 20555-0001; with copies to the Regional Administrator, Region II; and the NRC resident inspector at the Watts Bar Plant.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). Adams is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

*/RA/*

Joel T. Munday, Director  
Division of Reactor Projects

Docket Nos. 50-390, 50-391  
License Nos. NPF-90, NPF-96

Enclosure:  
IR 05000390/2016013 and  
05000391/2016013 w/Attachment:  
Supplemental Information

SUBJECT: WATTS BAR NUCLEAR PLANT – NRC PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION (PART 2); AND SAFETY CONSCIOUS WORK ENVIRONMENT ISSUE OF CONCERN FOLLOW-UP; NRC INSPECTION REPORT 05000390/2016013, 05000391/2016013 March 10, 2017

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**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION II**

Docket No.: 50-390, 50-391

License No.: NPF-90, NPF-96

Report No.: 05000390/2016013, 05000391/2016013

Licensee: Tennessee Valley Authority (TVA)

Facility: Watts Bar, Units 1 and 2

Location: Spring City, TN 37381

Dates: October 31 – December 1, 2016

Inspectors: C. Kontz, Senior Project Engineer (Team Lead)  
S. Morrow, Human Factors Engineer (Lead Safety Culture Assessor)  
D. Willis, Allegations Team Leader  
J. Wallo, Senior Security Inspector  
C. Even, Senior Construction Inspector  
R. Taylor, Senior Project Inspector  
J. Hamman, Resident Inspector Watts Bar  
T. Stephen, Resident Inspector Browns Ferry

Approved by: Alan Blamey, Chief  
Reactor Projects Branch 6  
Division of Reactor Project

Enclosure

## SUMMARY

IR 05000390/2016013 and 05000391/2016013; October 31 – December 1, 2016; Watts Bar, Units 1 and 2; (Problem Identification and Resolution).

This inspection constituted the conclusion of the biennial inspection of the Problem Identification and Resolution Program and was conducted by a senior project engineer, two resident inspectors, human factors engineer, an allegations team leader, senior allegations coordinator, and a senior construction inspector. One Apparent Violation (AV), one Severity Level IV (SLIV) violation, and one Green Finding were identified. The significance of inspection findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP) dated April 29, 2015. Cross-cutting aspects are determined using IMC 0310, "Components Within the Cross Cutting Areas" dated December 4, 2014. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy dated August 1, 2016. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 6.

### Identification and Resolution of Problems

The inspectors identified several examples that demonstrated weaknesses in the licensee's ability to identify problems and enter them into the CAP for resolution, as evidenced by the number of deficiencies identified by external organizations (including the NRC) that had not been previously identified by the licensee and placed into the CAP, during the review period. The prioritization of issues was effective; however, a weakness was noted in the root cause evaluations for significant problems. Corrective actions developed and implemented for issues were generally effective and implemented in a timely manner. The inspectors determined that overall, audits and self-assessments were adequate in identifying deficiencies and areas for improvement in the CAP, and appropriate corrective actions were developed to address the issues identified. Operating experience usage was found to be generally acceptable and integrated into the licensee's processes for performing and managing work, and plant operations.

#### A. NRC-Identified Findings and Self-Revealed Findings

##### Cornerstone: Other

- Green. The NRC identified a Finding for the licensee's failure to consistently implement the program requirements of the CAP. Specifically, the licensee failed to implement NPG-SPP-22.301, section 3.2.2 which required the licensee's staff to initiate a Condition Report (CR) to enter various items into their CAP. The licensee placed this issue into their corrective action program.

The performance deficiency was more than minor because, if left uncorrected, issues would remain unanalyzed that could represent a more significant safety concern. The performance deficiency was screened using IMC 0609, Appendix A, Exhibit 2 Mitigating Systems Cornerstone dated June 19, 2012. The finding screened to Green because none of the examples were related to any structure, system, component, (SSC)

exceeding its technical specification allowed outage time. A cross cutting aspect of Identification was assigned because the licensee's threshold for identifying and entering issues into their CAP was not low enough as defined by their procedures. (P.1) (Section 40A2)

- SL-IV. The NRC identified a Non-cited Violation (NCV) of 10 CFR 50.9, "Completeness and Accuracy of Information" for the licensee's failure to provide accurate information in all material respects to the Commission. The team determined on April 22, 2016, the licensee provided inaccurate information in a letter to the NRC titled, RESPONSE TO NRC LETTER CONCERNING A CHILLED WORK ENVIRONMENT FOR RAISING AND ADDRESSING SAFETY CONCERNS AT THE WATTS BAR NUCLEAR PLANT (ML16113A228). This information was material because the NRC relied on this information to conclude that TVA was in compliance with CO-EA-09-009/203 requirements. The licensee placed this issue into their corrective action program.

The NRC determined this violation constituted a more than minor traditional enforcement violation associated with failure to provide accurate information. The ROP's significance determination process does not specifically consider the regulatory process impact in its assessment of licensee performance. Therefore, it is necessary to address violations which impede the NRC's ability to regulate using traditional enforcement. The inspector determined that the licensee's failure to provide accurate information was a violation of 10CFR50.9 which had the potential to impede or impact the regulatory process, and therefore subject to traditional enforcement as described in the NRC Enforcement Policy, dated November 1, 2016. This violation is characterized as a Severity Level IV violation because it was similar to Example Section 6.9.d.1 of the NRC Enforcement Policy. (Section 40A5.1.b)

- TBD. The NRC identified an Apparent Violation of Confirmatory Order Modifying License, (EA-09-009,203) Dated December 22, 2009 (ML093510993) for the licensee's failure to; (1) implement a process to review proposed licensee adverse employment actions at Watts Bar Nuclear plant before actions were taken to determine whether the proposed action comports with employee protection regulations, and whether the proposed actions could negatively impact the SCWE; and (2) implement a process to review proposed significant adverse employment actions by contractors performing services at TVA's nuclear plant sites before the actions were taken to determine whether the proposed action comports with employee protection regulations, and whether the proposed action could negatively impact the SCWE.

The NRC determined this violation constituted a more than minor traditional enforcement violation associated with failure to implement actions required by Confirmatory Order Modifying License, (EA-09-009,203). The ROP's significance determination process does not specifically consider the regulatory process impact in its assessment of licensee performance. Therefore, it is necessary to address violations which impede the NRC's ability to regulate using traditional enforcement. The inspector determined that the licensee's failure to implement the requirements of the Confirmatory Order had the potential to impede or impact the regulatory process, and therefore subject to traditional enforcement as described in the NRC Enforcement Policy, dated November 1, 2016. The NRC has not made an enforcement decision on this matter. (Section 40A5.2.b)



B. Licensee-Identified Violations

Violations of very low safety or security significance or Severity Level IV that were identified by the licensee have been reviewed by the NRC. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. These violations and corrective action tracking numbers are listed in Section 4OA7 of this report.

## REPORT DETAILS

### 4OA2 Problem Identification and Resolution

#### 1. Corrective Action Program Effectiveness

##### a. Inspection Scope

The team reviewed the licensee's CAP procedures, which described the administrative process for initiating and resolving problems primarily through the use of condition reports (CRs). To verify that problems were being properly identified, appropriately characterized, and entered into the CAP, the inspectors reviewed CRs that had been issued between November 2014 and October 2016. Where possible, the team independently verified that the corrective actions were implemented as intended.

The team also reviewed selected common causes and generic concerns associated with root cause analyses (RCA) to determine if they had been appropriately addressed. To help ensure that samples were reviewed across all cornerstones of safety identified in the Reactor Oversight Process (ROP), the team selected a representative number of CRs that were identified and assigned to the major plant departments, including quality assurance, operations, health physics, chemistry, emergency preparedness and security. These CRs were reviewed to assess each department's threshold for identifying and documenting plant problems, thoroughness of evaluations, and adequacy of corrective actions. The team reviewed selected CRs, verified corrective actions were implemented, and attended meetings where CRs were evaluated for significance to determine whether the licensee was identifying, accurately characterizing, and entering problems into the CAP at an appropriate threshold.

The inspectors reviewed CRs, maintenance history, corrective actions (CAs), completed work orders (WOs) for selected systems, and reviewed associated system health reports. These reviews were performed to verify that problems were being properly identified, appropriately characterized, and entered into the CAP. Items reviewed generally covered a two-year period of time; however, in accordance with the inspection procedure, a five-year review was performed for selected systems for age-related issues.

The main control room deficiency list was assessed to ascertain if deficiencies were entered into the CAP and tracked to resolution. Operator workarounds and operator burden screenings were reviewed, and the inspectors verified appropriate compensatory measures were being implemented in the field for the deficient equipment. The inspectors also reviewed Shift Orders, Standing Orders, and Operational Decision making instructions.

The inspectors conducted a detailed review of selected CRs to assess the adequacy of the root cause and apparent cause evaluations of the problems identified. The inspectors reviewed these evaluations against the descriptions of the problem described in the CRs and the guidance in licensee procedure NPG-SPP-22.306, "Level 1 Evaluation" and NPG-SPP-22.305, "Level 2 Evaluation." The inspectors assessed if the licensee had adequately determined the cause(s) of identified problems, and had adequately addressed operability, reportability, common cause, generic concerns,

extent-of-condition, and extent-of-cause. The review also assessed if the licensee had appropriately identified and prioritized corrective actions to prevent recurrence.

The inspectors reviewed selected industry operating experience (OE) items, including NRC generic communications, to verify that they had been appropriately evaluated for applicability and that issues identified through these reviews had been entered into the CAP.

The inspectors reviewed site trend reports, to determine if the licensee effectively trended identified issues and initiated appropriate corrective actions when adverse trends were identified.

The inspectors reviewed licensee audits and self-assessments, including those which focused on problem identification and resolution programs and processes, to verify that findings were entered into the CAP and to verify that these audits and assessments were consistent with the NRC's assessment of the licensee's CAP. The inspectors attended various plant meetings to observe management oversight functions of the corrective action process. These included the Plant Screening Committee (PSC) and Management Review Committee meetings.

Documents reviewed are listed in the Attachment.

b. Assessment

Problem Identification

The inspectors identified a weakness in the licensee's ability to identify problems and enter them into the CAP. This conclusion was based on a review of the requirements for initiating CRs as described in licensee procedure NPG-SPP-22.300, "Corrective Action Program," and management's expectation that employees were encouraged to initiate CRs for any reason. Additionally, the inspectors identified significant challenges to the site's environment for raising concerns as discussed in a later section of this report. Trending was generally effective in monitoring equipment performance. Site management was actively involved in the CAP and focused appropriate attention on significant plant issues. Based on reviews and walkdowns of accessible portions of the selected systems, the inspectors determined that system deficiencies were being identified and placed in the CAP.

The inspectors identified multiple issues surrounding the licensee's review of the events that led to the Unit 1, November 11, 2015, use of the Residual Heat Removal (RHR) system to arrest an uncontrolled rise in Pressurizer Level as documented in CR 1199024. The licensee failed to document these events in their control room logs, they failed to follow their procedures for placing RHR into service, and they failed to follow their operability procedures (these issues were dispositioned in Watts Bar Inspection Report 2016-001)(ML 16098A323). Additionally, the licensee exceeded their self-imposed time limit for initiation of a condition report and commencement of a causal analysis for these issues. The licensee took 55 days to generate a condition report to begin their required causal analysis of this issue, which was in excess of the 12 hour time limit and thus the condition report was not able to be screened promptly.

The inspectors identified weaknesses in the licensee's ability to identify problems as evidenced by multiple examples associated with not appropriately entering issues into the CAP. The inspectors determined that issues identified through external reviews were not consistently being input into the CAP but rather addressed by actions outside of the CAP. The majority of the issues identified in the reviews met NPG-SPP-22.301 criteria for CR initiation. Additionally, the resident inspectors identified multiple examples of issues that would not have been entered into the licensee's CAP without their involvement.

The inspectors found that the licensee had an adequate process for identifying Operator Burdens, Workarounds, and Control Room Deficiency issues, entering them into the corrective action program, screening them to the appropriate level per site procedures, and generating an up to date control room deficiency list each day. The control room deficiency list comported with the inspector's walk-down of the main control board. Additionally, the inspectors reviewed the transition process from CR to work order for operator burdens, workarounds, or control room deficiencies.

The inspectors noted that the CR software (MAXIMO) does not have a function to allow a CR initiator to code an issue as either an operator burden, workaround, or control room deficiency. The initiator must identify that the condition reported is one of these types of issues by entering descriptive text into the CR detail or summary field. The licensee's Quality Assurance (QA) department identified four condition reports where the condition represented a control room deficiency; however, that terminology was not used in the detail or summary field, and the CRs were not properly screened as C Level CRs as required by NPG-SPP-22.302 by the PSC. Instead, the CRs were screened as work order only. The licensee entered this QA finding into their corrective action program as CR 1152376. Once the CRs are transferred to a work order, focus codes are added and the main control room deficiency list is then generated off the focus codes, and provided to the control room staff each morning.

The inspectors also reviewed a failure of the Unit 1 1B-B Centrifugal Charging Pump (CCP) room cooler on December 4, 2015. The analysis that was completed on May 13, 2016, did not identify the true cause of the failure. Following the second failure on August 3, 2016, the licensee was able to identify the cause and appropriate corrective actions.

#### Problem Prioritization and Evaluation

Based on the review of CRs sampled by the inspection team during the onsite period, the inspectors concluded that problems were generally prioritized and evaluated in accordance with the licensee's CAP procedures as described in NPG-SPP-22.302, "Corrective Action Program Screening." One notable exception the inspectors identified was the weakness identified in the performance of formal root cause analysis. Inspectors concluded CRs were assigned a priority level at the CR screening meeting, and adequate consideration was given to system or component operability and associated plant risk.

The inspectors identified weaknesses in the performance of formal root cause evaluations for significant problems. The inspectors determined that station personnel had conducted root cause and apparent cause analyses mostly in compliance with the licensee's CAP procedures and assigned cause determinations were appropriate, considering the significance of the issues being evaluated. A variety of formal causal-analysis techniques were used depending on the type and complexity of the issue consistent with licensee procedures NPG-SPP-22.300, "Corrective Action Program", NPG-SPP-22.306, "Level 1 Evaluation", and NPG-SPP-22.305, "Level 2 Evaluation." There were several examples of root cause evaluations that did not meet the licensee's procedural requirement for independence. This constitutes roughly half of all the licensee's root cause evaluations performed since the last PI&R inspection. The licensee's procedures required the Responsible Manager who approved the root cause evaluations to be independent from the organization involved in the event. The licensee's procedures also required that the members of the root cause evaluation team not include personnel who were directly involved or immediately responsible for the problem. Independence for personnel approving or conducting a root cause evaluation is not a NRC requirement.

- 1) Chilled Work Environment Root Cause (Revision 0 and 1) (CR 1155393) was approved by a different Watts Bar senior manager for each revision despite the fact that Watts Bar senior management was involved in the chilling effect.
- 2) Scope Growth on a Safety Related Component (Revision 0 and 1) (CR 1199024) had a member of the root cause team that was in the Outage Control Center leading up to the event that required a causal evaluation.
- 3) Unit 1 Ice Bed Temperature Increasing root cause evaluation (Revision 1) (CR 974404) was approved by a manager who was responsible for the organization that was determined to be the direct cause of the event.
- 4) Unit 1 Manual Reactor Trip root cause evaluation (Revision 0) (CR 991403) was approved by a manager who was responsible for the work group that was the root cause for the event.
- 5) Inoperable Source Range Detectors during Reactor Startup (Revision 1) (CR 1096405) was approved by a manager who was responsible for the work group that was a contributing cause for the event.
- 6) Seal Plug Found Loose on Control Rod Drive Mechanism (Revision 0) (CR 1102231) had a member of the root cause team that was responsible for one of the programs that was determined to be a contributing cause for the event.

The inspector identified the licensee did not adhere to their standards for performing a root cause analysis in completing the initial revision of the Chilled Work Environment Root Cause (CR 1155393). The licensee received some support from an external contractor to review the root cause and incorporated some changes into revision 1 of the RCA. Not all recommendations or conclusions presented were accepted by the licensee. These potential gaps were not entered into the CAP and addressed through the program but rather addressed by revising the original RCA. Specifically, the following items were most significant:

- 1) The root cause did not fully evaluate the ineffectiveness of the implementation of the 2009 NRC Confirmatory Order [EA-09-009, EA-09-203]. The root cause only mentions this order in the timeline.
- 2) The root cause references the work done in a separate causal analysis for a loss of confidence in the corrective action program (CR 1151960). However, neither

- 3) addresses the communication of why decisions were made to the disposition and prioritization of corrective actions. This could have been a contributing cause to the chilling effect.
- 4) The extent of condition of the chilling effect to other departments at Watts Bar was dismissed without an adequate basis. The inspectors discovered substantial weaknesses in various attributes of SCWE in other departments that were at risk of a chilling effect.

The inspectors identified examples where CRs or actions were closed to separate CRs causing challenges in implementing effective evaluation of issues. One example included CR 1151962 which was initiated in response to an internal Special Review Team report. The CR was specific and clearly worded that if the decision is made not to perform causal evaluation, the disposition of this CR must be provided to the WBN Plant Manager for his concurrence. CR 1151962 was approved for closure to RCA 1155393 by the Licensing Manager without the need for immediate and interim actions being evaluated and documented in CR 1151962.

The issue was subsequently inadequately captured in CR 1155393 Root Cause Investigation Charter as a weakness associated with implementation of the Adverse Employment Action procedure (NPG-SPP-11.10). CR 1155393 Root Cause Analysis did not address the knowledge weakness associated with the implementation of the Adverse Employment Action procedure. A causal evaluation was not performed to understand the organizational and programmatic factors that allowed this weakness to manifest itself as required in the original CR and there was no indication that the disposition of the original CR was provided to the WBN Plant Manager for his concurrence.

#### Effectiveness of Corrective Actions

Based on a review of corrective action documents, interviews with licensee staff, and verification of completed corrective actions, the inspectors determined that overall, corrective actions were timely, commensurate with the safety significance of the issues, and effective, in that conditions adverse to quality were corrected and non-recurring. For Significant Conditions Adverse to Quality (SCAQ), the corrective actions directly addressed the cause and effectively prevented recurrence in that a review of performance indicators, CRs, and effectiveness reviews demonstrated that the significant conditions adverse to quality had not recurred. Effectiveness reviews for corrective actions to prevent recurrence (CAPRs) were generally sufficient to ensure corrective actions were properly implemented and were effective.

The team reviewed green findings since the last PI&R along with CR's written to document the findings. The inspectors found that the CRs had adequate corrective actions in place, completed actions were appropriately closed, and open actions had reasonable dates for completion. The inspectors reviewed the actions for the CRs and noted that the majority of them were corrective actions not only for what happened, such as the performance deficiency, but also included corrective actions for the reason why the performance deficiency happened.

However, the inspectors identified several examples of corrective actions that were inadequate, closed without an adequate basis, or CAPR actions that may not prevent recurrence.

1. Corrective action number 6 from the licensee's Security Loggable Event root cause was ineffective in that it did not require the licensee to implement changes to the Security Performance Improvement Plan. (CR 1228949)
2. Corrective action number 17 from the licensee's CEL Response (CR 1162755) was closed without an adequate basis. The inspectors determined that the action was closed without providing objective evidence that an effectiveness review was completed.
3. Corrective action number 18 from the licensee's Chilled Work Environment Root Cause Analysis (CR 1155393) was closed without an adequate basis. The corrective action was to verify that the chilling effect in the operations department at Watts Bar did not extend to other departments on site. The inspectors determined that there was insufficient evidence at the time of closure to make this determination.
4. The root cause for the Unit 1 1B-B CCP room coolers failures (CR 1131520) was a lack of procedural direction to ensure that CAPRs remain in effect to correct SCAQs.
5. The CAPR for the Scope Growth on a Safety Related Component root cause (CR 1199024) does not address the Outage Control Center's role in the event and most likely will not preclude repetition.

These examples indicate that there are some challenges to the licensee's ability to sustain their corrective action program.

c. Findings

Introduction: The NRC identified a Green Finding for the licensee's failure to consistently implement the requirements of the CAP. Specifically, the licensee failed to implement NPG-SPP-22.301, section 3.2.2 which required the licensee's staff to initiate a CR to enter various items into their CAP.

Description: During the preparation for the 2016 Problem Identification and Resolution inspection the licensee contracted an outside organization to review several of their causal analyses and CEL responses. The outside organization identified multiple examples of issues that were not subsequently entered into the licensee's corrective action program. These issues met the CR initiation requirements of NPG-SPP-22.301, Condition Report Initiation, section 3.2.2, When to Initiate a Condition Report, which requires in part, any condition adverse to quality (CAQ), equipment issue, performance concern, issue not meeting written management expectations, and identified gaps to standards be documented in a Condition Report.

Some of these examples of the outside organization's issues are listed below:

- 1) The independence of the people assigned to perform the Chilled Work Environment root cause and the Special Review Team was in question. These teams consisted primarily of TVA managers.
- 2) The closure documentation for some corrective actions in the Chilled Work Environment root cause did not include the critical thinking for closure or decisions made regarding long term practices.

- 3) The CEL response and the Chilled Work Environment Root Cause Analysis (RCA) (CR 1155393) did not address the evaluation of the implementation of Confirmatory Order (EA-09-009, EA-09-203) in a substantial manner. This was required by the NRC CEL to WBN. Specifically, only 4 of the 10 required actions had a documented review. Additionally, 2 of the 10 that were reviewed were considered ineffective.
- 4) The CR 1162755 causal analysis did not address why 20% of CAP items converted to work orders were subsequently closed with no work occurring.
- 5) The effectiveness of the adverse employment action procedure was not evaluated in the CR 1155393 RCA for two events whose subsequent management actions should have been considered adverse which were not entered into the adverse employment action procedure. The events were the Unit Supervisor that was pulled off shift and the training instructor who was reassigned from the Outage Control Center back to the training center.
- 6) Four actions to change procedures in CR 1127691 (actions 006/009/010/016) were incorrectly coded as enhancements vice corrective actions and were subsequently not approved to be performed. Since these procedure changes were enhancements, they only needed peer review and the peer disapproved the changes.
- 7) CR 1102231 and the causal analysis never evaluated whether a 10 CFR 21 evaluation was done for reportability. The RCA concluded that a possible cause for the decreased in vent plug torque was a "latent design flaw." Latent design flaws are required to be evaluated under 10 CFR 21.

Analysis: The licensee's failure to implement the requirements of their CAP as required by NPG-SPP 22.301 was a performance deficiency. Specifically, on at least seven occasions, the licensee failed to enter issues into their CAP that would have required corrective actions. The performance deficiency was more than minor because, if left uncorrected, issues would remain unanalyzed that could represent a more significant safety concern. The performance deficiency was screened using IMC 0609, Appendix A, Exhibit 2 Mitigating Systems Cornerstone dated June 19, 2012. The finding screened to Green because none of the examples were related to any SSC exceeding its technical specification allowed outage time. A cross cutting aspect of Identification was assigned because the licensee's threshold for identifying and entering CAQ into their CAP was not low enough as defined by their procedures. (P.1)

Enforcement: Inspectors did not identify a violation of regulatory requirements associated with this finding. FIN 050000390, 391/2016013-01, "Failure to Implement the Program Requirement to Enter Issues into the CAP."

## 2. Use of Operating Experience (OE)

### a. Inspection Scope

The team examined the licensee's use of industry OE to assess the effectiveness of how external and internal operating experience information was used to prevent similar or recurring problems at the plant. In addition, the team selected operating experience documents (e.g., NRC generic communications, 10 CFR Part 21 reports, licensee event reports, vendor notifications, and plant internal operating experience items, etc.), which had been issued since November 2014, to verify the licensee had appropriately



evaluated each notification for applicability to the Sequoyah Nuclear Plant, and if issues identified through these reviews were entered into the CAP.

b. Assessment

Based on a review of selected documentation related to operating experience issues, the inspectors determined that the licensee was generally effective in screening operating experience for applicability to the plant. Industry OE was evaluated at either the corporate or plant level depending on the source and type of the document. Relevant information was then forwarded to the applicable department for further action or informational purposes. OE issues requiring action were entered into the CAP for tracking and closure. In addition, operating experience was included in all apparent cause and root cause evaluations in accordance with licensee procedure NPG-SPP-22.500, "Operating Experience Program."

The team noted that the site is working on making their OE program more robust as they self-identified some screening weaknesses prior to our inspection.

Documents reviewed are listed in the Attachment.

c. Findings

No finding were identified.

3. Self-Assessments and Audits

a. Inspection Scope

The team reviewed audit reports and self-assessment reports, including those which focused on problem identification and resolution, to assess the thoroughness and self-criticism of the licensee's audits and self-assessments. The team reviewed implementation and audits of the Quality Assurance program against Nuclear Quality Assurance Plan (NQAP) (TVA-NQA-PLN89-A Rev. 0032) and ANSI/ANS-3.2-2012: Managerial, Administrative, and Quality Assurance Controls for the Operational Phase of Nuclear Power Plants. Additionally, the team verified that problems identified through those activities were appropriately prioritized and entered into the CAP for resolution in accordance with licensee procedure NPG-SPP-22.102, "NPG Self-Assessment and Benchmarking Program."

Documents reviewed are listed in the Attachment.

b. Assessment

The team determined that the scopes of assessments and audits were adequate. Self-assessments were generally detailed and critical. The team verified that CRs were created to document areas for improvement and findings resulting from the self-assessments, and verified that actions had been completed consistent with those recommendations. Audits of the quality assurance program appropriately assessed performance and identified areas for improvement. Generally, the licensee performed evaluations that were technically accurate.

c. Findings

No finding were identified.

4. Safety-Conscious Work Environment

a. Inspection Scope

The team conducted interviews and focus groups with 28 staff, primarily at the first line supervisor level or above to provide insights regarding the licensee's safety conscious work environment (SCWE). These interviews and focus groups were used to supplement the information gathered during Part 1 of the PI&R inspection (IR 05000390/2016007; ML16300A409). The team also reviewed the licensee's programs and processes for assessment and monitoring of nuclear safety culture, and the licensee's Employee Concerns Program (ECP) to verify they were effective at supporting the SCWE.

b. Assessment

Safety Conscious Work Environment

During Part 1 of the PI&R inspection, many of the non-supervisory employees interviewed felt that their supervisors were most at risk for being retaliated against for raising concerns. However, all supervisory staff interviewed during Part 2 of the inspection indicated that they were willing to raise nuclear safety concerns and felt free to raise concerns to their direct supervisors without fear of retaliation. Many supervisory staff acknowledged that there had been challenges to the SCWE in their departments in the past year, but that actions taken following the CEL have resulted in improvements. However, similar to non-supervisory staff, most supervisory staff also expressed a "wait and see" attitude with regard to the sustainability of positive changes. Although there continued to be department-specific challenges to the work environment, the team observed that senior management was aware of the challenges and taking actions to address those challenges. However, with the exception of the Operations department, many of the other department-specific actions taken or planned to improve the safety culture and SCWE were not being documented and tracked within the scope of WBN's chilled work environment improvement plan.

In addition to the feedback provided by non-supervisory staff during Part 1 of the PI&R inspection, the insights provided by the supervisory staff confirmed that there were site-wide challenges to the SCWE at WBN. However, management's actions to address the chilled work environment had improved some of the most significant issues identified by non-supervisory employees (e.g., management behaviors that discouraged the free flow of information), and additional actions were planned to address more long-standing concerns, such as perceptions regarding the lack of adequate resolution to problems identified via the corrective action program. Notwithstanding these improvements, the conditions that prompted the issuance of the CEL were confirmed to extend beyond the Operations department, and the corrective actions to address the CEL should appropriately be extended site-wide. However, as noted previously, the lack of documentation and tracking of department-specific actions outside of the Operations department may impede the site's ability to thoroughly evaluate the effectiveness of actions to address department-specific SCWE challenges.

## Nuclear Safety Culture Assessment and Monitoring

The team identified weaknesses in the assessment and monitoring of safety culture. In particular, the team noted a lack of clear, objective or independent criteria for evaluating when nuclear safety culture standards were met. This was evidenced in how the site interpreted responses from safety culture surveys and interviews, and how the Nuclear Safety Culture Monitoring Panel (NSCMP) and Site Leadership Team (SLT) rated nuclear safety culture traits as part of their continuous monitoring process. The lack of clear criteria for evaluating nuclear safety culture standards likely contributed to the missed opportunities to identify and address safety culture weaknesses prior to the development of the chilled work environment.

- The Extent of Condition review in the Chilled Work Environment Root Cause (RCA CR 1155393, Attachment E) noted that site-wide pulsing surveys at WBN had a declining trend from 2015 to March of 2016. In particular, the percentage of employees who responded favorably to the question, “my work environment encourages the voluntary expression of concerns and differing views about nuclear safety or quality,” dropped from 89% in 2015 to 69% in March of 2016. However, the extent of condition review concluded that, “there was no evidence of a chilled work environment in any of the WBN departments outside of Operations.” Although the extent of condition was ultimately extended to the entire site, the statement that there was “no evidence of a chilled work environment” in other departments was not consistent with the data presented.
- The Extent of Condition review in RCA CR 1155393 also noted that pulsing surveys improved for the Operations department from February 2016 to March 2016. However, an in-depth review of the ECP pulsing data and interviews with the ECP manager revealed that the pulsing surveys in Operations were being conducted on a shift-by-shift basis. As a result, differences in the monthly pulsing survey results for Operations may not have indicated actual improvements or declines in the work environment, but rather different perceptions of the work environment held by different shifts in Operations.
- The Employee Concerns Program Conduct of Operations Manual, Rev. 1, states that when analyzing responses to questions in the SCWE, Management, and Precursor categories, “it is ideal for responses to be greater than 90% “Always.” At a minimum the aggregate of “Always” and “Often” should be greater than 90%.” However, these standards for evaluating survey results were not consistently adhered to, as the 2015 pulsing surveys results did not meet the minimum threshold of 90% favorable for six out of seven survey questions in the aforementioned categories. Interviews also suggested that, at times, when the senior management team reviewed responses to the pulsing surveys, the “sometimes” response was included as a favorable response, which also suggested a relaxation of standards for evaluating safety culture data.
- Presentation materials from the nuclear safety culture and employee engagement survey conducted in 2015 suggested an improving culture at WBN, primarily based on one survey question that indicated 75% of the respondents believed the safety culture at WBN had improved in the past year. However, this limited assessment of the results did not highlight ongoing challenges to the WBN safety culture or department-specific challenges, which were apparent in a

detailed review of department-specific survey results and comments. In addition, a single positive statement from the 2015 survey was used as the basis for determining the safety culture was improving as part of the Chilled Work Environment RCA. Although WBN recognized the performance deficiency to track and evaluate results from nuclear safety culture surveys, as required by NPG-SPP-01.7.3 (CR 1186612), a detailed review of the 2015 survey results was never performed as part of the RCA. A single indication of an improving culture was inappropriately used as evidence of a healthy or acceptable culture.

- In September 2016, the Site Leadership Team (SLT) convened for its semi-annual nuclear safety culture meeting. This meeting consisted of a review of the last 6 months of information from the Nuclear Safety Culture Monitoring Panel (NSCMP), which met monthly rather than quarterly as one of the interim corrective actions the site took due to the issuance of the CEL in March 2016. Although the NSCMP never rated the environment for raising concerns as a strength during the previous 6 month period, the SLT chose to rate this safety culture trait as a strength (the NSCMP rated the trait as an improvement opportunity on three occasions, and acceptable on two occasions from April-August). The SLT meeting minutes noted that the environment for raising concerns was rated as a strength because all employees feel comfortable raising concerns and no examples could be provided where individuals did not raise concerns. There was no mention of ECP pulsing surveys, which continued to indicate challenges to the SCWE in Operations, extent of condition reviews that identified SCWE challenges in other departments, or ongoing actions to respond to the Chilling Effect Letter issued by the NRC.
- Also during the September 2016 meeting the SLT rated the problem identification and resolution trait as acceptable, even though the NSCMP consistently rated problem identification and resolution as an improvement opportunity from April-August. The basis for the acceptable rating was noted to be because the site does well at identifying issues and trending of issues had improved. However, this rating did not reflect longstanding concerns employees had voiced with regard to the effective resolution of issues. Overall, the SLT rated six traits as acceptable, three as improvement opportunities, and one trait as a strength.
- The October 2016 meeting of the NSCMP resulted in lower ratings for many of the nuclear safety culture traits as compared to previous meetings. However, the decline in the ratings was not believed to reflect a decline in the site-wide safety culture, but rather a more accurate indication of the current status of the safety culture. The basis for the change in the index was attributed to the inclusion of more craft (non-supervisory) employees at the NSCMP meeting. Six traits were rated as improvement opportunities, and four traits were rated as acceptable. As a result, previous NSCMP ratings of safety culture were speculated to be overly positive.
- The overall effectiveness measure for CAPR closure in the Chilled Work Environment RCA (CR 1155393) had multiple weaknesses that could challenge the integrity of the effectiveness review.

- Some success criteria were vague and open to interpretation. For instance, one of the success criteria was “favorable results” from employee engagement surveys, yet it was not clear what constituted favorable results. The 2015 employee engagement survey was evaluated as “favorable,” yet further review revealed substantial negative write-in comments and selected departments with lower scores on key safety culture measures. In addition, it was not clear what constituted a “satisfactory” interim effectiveness review.
- Some success criteria only required evidence that a corrective action had been completed, not whether the action achieved its intended result. For example, completion of training and non-training actions from the RCA.
- Some success criteria included vague qualifiers, such as “applicable” or “selected.”
- The effectiveness measure did not stipulate whether all, or only some, of the success criteria must be met.

The team also identified weaknesses in the training provided to employees who are responsible for providing inputs to the nuclear safety culture monitoring process, and employees who are analyzing and making assessments based on these inputs, such as the participants on the NSCMP. The team noted that all managers and staff receive computer-based training (CBT) on safety culture and SCWE as part of their initial training upon hire. In addition, employees were required to take refresher CBT in 2016 as part of the chilled work environment corrective actions. The CBT primarily focused on defining safety culture terms and emphasizing employees’ rights and responsibilities to raise nuclear safety concerns. However, there was no additional training for NSCMP members to assist them in preparing inputs to the panel meetings or evaluating the inputs provided at the panel meetings. The lack of training to develop a common understanding of what to look for in the work environment that could indicate a declining safety culture may continue to challenge the effectiveness of safety culture self-assessments.

One of the changes made to the NSCMP meeting format as part of the chilled work environment improvement plan was to include craft and other non-supervisory employees in the NSCMP meetings. Interviews indicated that this change was viewed by management and employees as an improvement to the culture monitoring process. The safety culture ratings from the October 2016 meeting also appeared to be more self-critical. However, the NSCMP ratings of the site’s safety culture were still susceptible to large fluctuations in ratings (e.g., over-weighting recent activities rather than taking a holistic view of the overall state of the safety culture). The sustainability of positive changes to the site’s safety culture may continue to be challenged without independent checks to ensure that self-assessments are appropriately self-critical.

#### Employee Concerns Program

The team determined that the documentation in ECP files was sufficiently detailed to demonstrate appropriate processing of concerns by ECP staff. However, within the ECP files, it was difficult to track what corrective actions the site had taken as a result of ECP recommendations. In some cases when CRs were developed to address ECP recommendations, some of the corrective actions were later changed or cancelled. The lack of documentation and follow-through to ensure that actions are taken as a result of ECP substantiated concerns may continue to challenge the perceived effectiveness of

ECP, particularly in cases where employees who raise concerns are not getting feedback regarding how their concerns were addressed.

c. Findings

No findings were identified.

4OA5 Other

1. Review of TVA Response to the Chilled Work Environment For Raising And Addressing Safety Concerns At The Watts Bar Nuclear Plant

a. Inspection Scope

On March 23, 2016, the NRC issued "CHILLED WORK ENVIRONMENT FOR RAISING AND ADDRESSING SAFETY CONCERNS AT THE WATTS BAR NUCLEAR PLANT" letter (ML16083A479). The NRC requested, in part, that the licensee provide their plan of action for addressing the chilled work environment to the NRC within 30 days of the date of the letter. Included in the plan the NRC requested TVA "evaluate effectiveness of the implementation of Confirmatory Order (EA-09-009, EA-09-203) requirements relative to the current conditions." The Confirmatory Order (CO) Item #1 required the licensee to implement a process to review proposed adverse employment actions before actions are taken to determine whether the proposed action comports with employee protection regulations, and whether the proposed actions could negatively impact the SCWE.

The inspectors reviewed TVA's April 22, 2016, response, entitled RESPONSE TO NRC LETTER CONCERNING A CHILLED WORK ENVIRONMENT FOR RAISING AND ADDRESSING SAFETY CONCERNS AT THE WATTS BAR NUCLEAR PLANT (ML16113A228).

b. Findings:

Introduction: The inspector identified a Severity Level IV NCV of 10 CFR 50.9 (a), "Completeness and accuracy of information", for the licensee's failure to provide accurate information associated with TVA's response to the "CHILLED WORK ENVIRONMENT FOR RAISING AND ADDRESSING SAFETY CONCERNS AT THE WATTS BAR NUCLEAR PLANT" letter dated March 23, 2016. Specifically, on April 22, 2016, the licensee provided information to the Commission that inaccurately indicated that the licensee completed an evaluation of the effectiveness of the implementation of CO (EA-09-009, EA-09-203) requirements relative to the current conditions at Watts Bar. The licensee entered this issue into the corrective action program as CR 1263417.

Description: On March 23, 2016 the NRC issued "CHILLED WORK ENVIRONMENT FOR RAISING AND ADDRESSING SAFETY CONCERNS AT THE WATTS BAR NUCLEAR PLANT" (ML16083A479) after determining that a chilled work environment existed in the Operations Department at Watts Bar Nuclear Plant. The NRC requested a response to the letter which included, in part, that the licensee provide their plan of action for addressing the chilled work environment to the NRC within 30 days of the date of the letter. Included in the plan we requested TVA "evaluate effectiveness of the implementation of Confirmatory Order (EA-09-009, EA-09-203) requirements relative to the current conditions."

On April 22, 2016, the licensee provided, RESPONSE TO NRC LETTER CONCERNING A CHILLED WORK ENVIRONMENT FOR RAISING AND ADDRESSING SAFETY CONCERNS AT THE WATTS BAR NUCLEAR PLANT (ML16113A228). In response to the NRC's request the licensee provided the following response:

“Requested Attribute 3: Evaluate effectiveness of the implementation of Confirmatory Order (EA-09-009, EA-09 203) requirements relative to the current conditions. A review was conducted to determine the effectiveness of the actions required by Confirmatory Order EA-09-009/203. The review found that there are two potential gaps and two additional corrective actions that need follow-up review.” Furthermore, in Table 3 this action was reported as complete.

The inspector reviewed the actions taken by the licensee which were identified as the basis for making these assertions to the NRC. The inspector reviewed the evaluation performed associated with CO Item #1. The action the licensee had taken credit for as an “effectiveness review” indicated an audit of the adverse action program was in progress and would be completed in April 2016. It detailed that afterwards, the licensee would review the audit to determine the effectiveness of this item and in the interim TVA drafted changes to the adverse action process to ensure safety conscious work environment issues were thoroughly reviewed prior to taking action. The licensee further documented completion of an effectiveness review of the CO in CR 1162755 Action 17.

The inspector determined the licensee based their April 22, 2016, response to the NRC on a report of the completion of these actions. Although these actions were intended to evaluate the effectiveness of the CO item #1, the licensee failed to recognize that this activity was not completed prior to their April 22, 2016, letter. Subsequent to the April 22, 2016, letter the licensee had not completed these actions and closed the action in the CAP.

Analysis: The NRC determined this constituted a more than minor traditional enforcement violation associated with failure to provide accurate information. A cross-cutting aspect was not assigned because traditional enforcement violations are not assessed for cross-cutting aspects. The ROP's significance determination process does not specifically consider the regulatory process impact in its assessment of licensee performance. Therefore, it is necessary to address violations which impede the NRC's ability to regulate, using traditional enforcement. The inspector determined that the licensee's failure to provide accurate information to the NRC was a violation of the requirements of 10 CFR 50.9, which had the potential to impede or impact the regulatory process, and therefore subject to traditional enforcement as described in the NRC Enforcement Policy, dated November 1, 2016. This violation is characterized as a Severity Level IV violation because it was similar to Example Section 6.9.d.1 of the NRC Enforcement Policy and was appropriate for the circumstances.

Enforcement: 10 CFR 50.9, “Completeness and Accuracy of Information” states, in part, that information provided to the Commission by a licensee shall be accurate in all material respects.

Contrary to the above, on April 22, 2016, TVA provided a letter to the Commission that was not accurate in all material respects. Specifically, TVA's letter was inaccurate in that it stated that (1) “A review was conducted to determine the effectiveness of the actions required by Confirmatory Order EA-09-009/203”; and (2) in “Table 3: Focus

Area: Willingness to Raise Concerns”, Assessment Activity, “Effectiveness review of CO EA-09-203”, “TVA will conduct an effectiveness review of the applicable corrective actions completed in accordance with CO-EA-09-009/203 to; Determine whether those corrective actions were effective in preventing or minimizing recurrence of the issue”. This Table 3 item was annotated as “Complete”.

These statements were not accurate, in that the licensee failed to complete a review to determine the effectiveness of action #1 required by Confirmatory Order EA-09-009/203. This information was material because the NRC relied on this information to determine if TVA was in compliance with Confirmatory Order EA-09-009/203 requirements, and was relied on to determine the need, extent, and scheduling of additional regulatory oversight. This issue has been entered into the licensee’s CAP as CR 1263417 and is being treated as an NCV consistent with Section 2.3.2.a of the Enforcement Policy, NCV 0500390, 05000391/2016013-02, Failure to Provide Accurate Information.

## .2 Implementation of the Confirmatory Order EA-09-009/203 at Watts Bar Nuclear Plant

### a. Inspection Scope:

The inspectors reviewed the licensee’s implementation of Confirmatory Order EA-09-009/203 and NPG-SPP-11.10 R4, Adverse Employment Action procedure. The inspector reviewed the licensee’s documentation of issues associated with the Adverse Employment Action procedure implementation in CR 1162755.

### Background

The inspector reviewed TVA documentation of issues associated with the Adverse Employment Action procedure implementation in CR 1162755 Action 27.

“\* Although process requirements were met referencing NPG-SPP-11.10 R4, it was recognized that the Site VP did not perform reviews of the HR reviews for disciplinary actions taken, as compared to VPs at SQN and BFN performing the reviews, considering SCWE. Per WBN HR, these reviews were not required if SCWE elements were not identified. As a result, industry procedures were reviewed for comparison of methods used.”

The NRC inspector reviewed NPG-SPP-11.10 R4. The CR 1162755 documentation incorrectly indicated that process requirements used to implement the CO were met. Specifically, this procedure required a review of HR disciplinary actions for SCWE implications, even if SCWE elements were not identified. The inspectors reviewed the following procedural sections of NPG-SPP-11.10, Revision 0004, that provide the site VP review requirements.

#### 3.1.5 Roles and Responsibilities - TVA Vice President (VP)

- A. At nuclear sites, the Site Vice President (or designee) will review certain proposed actions as described in this SPP to determine if those actions may be viewed as harassment, intimidation, retaliation or discrimination (HIRD) or will likely create a chilling effect in the affected organization, or in other organizations.



### 3.2.2 Review Process - Personnel Actions Impacting TVA Employees

D. The Vice President (or designee) will complete section 3, Vice President Record of Action of form 41175.

E. If the Vice President (or designee) determines that the proposed personnel action may be viewed as HIRD or will likely create a chilling effect in the affected organization, or in other organizations, the Vice President (or designee) will direct the Line Manager to prepare a Chilling Effect Mitigation Plan (section 4 of form 41175) for Vice President (or designee) review and approval before taking any proposed personnel action.

F. For NPG employees, if documentation indicates protected activity, the Line Manager proposing a personnel action under review may not take such action through the discipline review process unless the Vice President (or designee) has rendered a determination of "no objection."

G. For employees outside of NPG, no proposed action may be initiated until the Vice President (or designee) has rendered a determination of "no objection."

### 3.2.3 Review Process - Personnel Actions Impacting Contractors

C. The TVA HR Representative ensures that the Vice President (or designee) reviews the package before action is taken and that Vice President Record of Action is completed. The Vice President (or designee) must review all proposed actions affecting Staff Augmented or Task Managed Contractors unless those actions are covered by an exclusion.

D. For proposed actions brought for review to the Vice President (or designee), the Vice President will complete section 3: Vice President Record of Action. The Vice President (or designee) will consider all relevant information including any extenuating or mitigating information.

The inspector also performed an independent review of the implementation of NPG-SPP-11.10, Adverse Employment Action procedure, because of the inconsistencies in CR 1162755. The inspector reviewed the implementing procedure and 9 samples (containing 15 actions) of the application of the Adverse Action Program from the past 24 months at Watts Bar. All of the samples that were reviewed were inadequate to meet the intent of the Confirmatory Order requirements.

An integrated review and grouping of the deficiencies from the review of the CR and interviews with site staff responsible for implementation indicated the existence of a more significant programmatic breakdown as compared to a collection of random individual implementer errors. These deficiencies were exhibited by the three fundamental groups primarily responsible for successful implementation of NPG-SPP-11.10, Attachment 2, TVA 41175 Adverse Employment Action Review process: Managers; Human Resources; and ECP staff. The deficiency grouping is listed below.

1. The inspector identified deficiencies in the ability of the licensee to determine if the subject employee had engaged in protected activity. NPG-SPP-11.10,

Section 3.2.2 Review Process - Personnel Actions Impacting TVA Employees, step B includes the following:

*“As part of completing the Human Resources Review, the HR Representative will do an independent verification of the employee's activity regarding Employee Concerns and Problem Evaluation Reports (PERs). The HR Representative shall contact the Employee Concerns Program regarding Employee Concern issues to verify if ECP contact has been made within the last twelve months. The applicable HR Representative shall contact the Performance Improvement group, or validate through Maximo, to identify if PERs have been generated within the last twelve months.”*

During review of the HR activities associated with independent verification of the employee's activity regarding Employee Concerns and PERs, the inspector identified multiple examples, of the following activities, which were inconsistent with the procedure requirements and each resulted in incorrect determinations if the subject employee had engaged in protected activity:

- a. HR was adding a qualifying criteria that PERs generated by the subject employee be “safety related” for them to be considered in the evaluation of potential protected activity. This distinction inappropriately excluded activities that should have been accounted for as participation in protected activity. This demonstrates a potential fundamental misunderstanding of applicability and purpose of the process.
  - b. In addition to identifying if PERs had been generated by the subject employee, HR was making determinations if the PERs constituted a protected activity through review of a simple list of CRs and not a review of their content.
  - c. ECP was adding a qualifying criteria that ECP concerns raised by the subject employee needed to be associated with the adverse action being proposed for them to be considered in the evaluation of protected activity. It was also not recognized that ECP contact does not need to be the subject of the adverse action for it to have a potential adverse effect on the SCWE.
2. There was a lack of rigor in implementing the process based on the quality of processing that was observed.
  3. Supervisors & HR representatives did not demonstrate an understanding of what was acceptable for the various required evaluations.
  4. Internal review of the program did not identify the widespread issues with implementation.
  5. After receiving feedback about the program implementation from internal reviews, issues were not identified and entered into the corrective action program. For example, the inspector identified that in the past 24 months no chilling effect mitigation plans were developed at Watts Bar. This condition was not viewed as significant or investigated more deeply as part of the investigation

into the Chilled Work Environment at WBN even though adverse actions and the perceptions they propagated were part of the identified causes. Additionally, a corporate TVA-wide audit in April 2016 highlighted a concern that none of the adverse actions sampled during that review had SCWE mitigation plans developed.

b. Findings

Introduction: The inspector identified an Apparent Violation of Confirmatory Order, (EA-09-009,203) Dated December 22, 2009 (ML093510993) for the licensee's failure to implement the requirements of the Order. Specifically, the licensee failed to; (1) implement a process to review proposed licensee adverse employment actions at Watts Bar Nuclear plant before actions were taken to determine whether the proposed action comports with employee protection regulations, and whether the proposed actions could negatively impact the SCWE; and (2) implement a process to review proposed significant adverse employment actions by contractors performing services at TVA's nuclear plant sites before the actions were taken to determine whether the proposed action comports with employee protection regulations, and whether the proposed action could negatively impact the SCWE. The NRC has not made an enforcement decision on this matter.

Description: Based on questions concerning the licensee's evaluation of the effectiveness of the implementation of Confirmatory Order (EA-09-009, EA-09-203) requirements relative to the current conditions, the inspector performed an independent review of the implementation of NPG-SPP-11.10, Adverse Employment Action procedure. The inspector reviewed the implementing procedure and 9 samples (containing 15 action evaluations, sample #2 contained 2 action evaluations and sample # 3 contained 6 action evaluations) of the application of the Adverse Action Program from the past 24 months at Watts Bar. (Due to the sensitive nature of the information reviewed, the inspector reviewed the results of the inspection activities with the HR manager and will only reference the records inspected as samples 1-9.)

The review of these records identified the following deficiencies:

- All samples were found to be inadequate and not meeting the intent of the Order.
- All were missing required documentation / evaluations. NPG-SPP-11.10 Sections 3.2.2, subsections A, B, C, E, F, G
- 6 samples did not have any VP/ERB review documented (Samples 1, 2, 3, 4, 8, 9) NPG-SPP-11.10 Sections 3.2.2, subsections C, E, F, G
- 8 samples indicated incorrect determinations of engagement in protected activity (Samples 1, 2, 3, 4, 5, 6, 7, 9) NPG-SPP-11.10 Sections 3.2.2, subsections A and B.
- Most did not have adequate, if any, assessment of potential effect on SCWE. (Samples 3, 4, 6, 7, 8, 9) NPG-SPP-11.10 Sections 3.2.2, subsections A and B

The inspector determined this constituted a failure to comply with requirement 1 contained in Confirmatory Order EA-09-009; 203. The licensee failed to implement a process to review proposed adverse employment actions before actions were taken to determine whether the proposed action comports with employee protection regulations, and whether the proposed actions could negatively impact the SCWE. The inspector

based this determination on every example reviewed included deficiencies that represented either an inadequacy or failure to make determinations of whether the proposed action comports with employee protection regulations and/or make determinations of whether proposed actions could negatively impact the SCWE.

Additionally, the inspector identified issues during the inspection which indicated the existence of a more significant programmatic breakdown as compared to a collection of individual implementer errors. These deficiencies were exhibited by the three fundamental groups primarily responsible for successful implementation of the Adverse Employment Action Review process (NPG-SPP-11.10, Attachment 2, TVA 41175): Managers; Human Resources; and ECP staff.

Analysis: The NRC determined this violation constituted a more than minor traditional enforcement violation associated with failure to implement actions required by Confirmatory Order Modifying License, (EA-09-009,203). A cross-cutting aspect was not assigned because traditional enforcement violations are not assessed for cross-cutting aspects. The ROP's significance determination process does not specifically consider the regulatory process impact in its assessment of licensee performance. Therefore, it is necessary to address violations which impede the NRC's ability to regulate, using traditional enforcement. The inspector determined that the licensee's failure to implement actions as required by Confirmatory Order Modifying License, (EA-09-009,203) dated December 22, 2009 (ML093510993), was an apparent violation. This violation had the potential to impede or impact the regulatory process, and therefore is subject to traditional enforcement as described in the NRC Enforcement Policy, dated November 1, 2016. The NRC has not made an enforcement decision on this matter.

Enforcement: Confirmatory Order Modifying License, (EA-09-009,203) dated December 22, 2009, (ML093510993) states, in part, that by no later than ninety (90) calendar days after the issuance of this Confirmatory Order, TVA shall implement a process to review proposed licensee adverse employment actions at TVA's nuclear plant sites before actions are taken to determine whether the proposed action comports with employee protection regulations, and whether the proposed actions could negatively impact the Safety Conscious Work Environment (SCWE). Such a process should consider actions to mitigate a potential chilling effect if the employment action, despite its legitimacy, could be perceived as retaliatory by the workforce.

Additionally, by no later than one hundred twenty (120) calendar days after the issuance of the confirmatory order, TVA shall implement a process to review proposed significant adverse employment actions by contractors performing services at TVA's nuclear plant sites before the actions are taken to determine whether the proposed action comports with employee protection regulations, and whether the proposed action could negatively impact the SCWE. Such a process will likewise consider actions to mitigate a potential chilling effect if the employment action, despite its legitimacy, could be perceived as retaliatory by the workforce.

TVA implements the above process through procedure NPG-SPP-11.10, Adverse Employment Action. NPG-SPP-11.10, Section 3.2.2, entitled "Review Process - Personnel Actions Impacting TVA Employees", paragraph D, states that the "Vice President (or designee) will complete section 3, Vice President Record of Action of form 41175" (attachment 2 to NPG-SPP-11.10). Form 41175, entitled "TVA 41175 Adverse Employment Action Review", states that "the purpose of the review is to ensure that

proposed actions (1) are warranted; (2) do not occur because an individual has engaged in a protected activity; and (3) do not create the perception that persons were retaliated against because they engaged in a protected activity.”

Additional actions are delineated in NPG-SPP-11.10 Sections 3.2.2, subsections A, B, C, E, F, G, related to the positions of the Vice President, Line Manager and the Human Resource Representative, and in Section 3.2.3, entitled “Review Process - Personnel Actions Impacting Contractors.”

Contrary to the above, from November 2014 to August 2016, the licensee failed to comply with Confirmatory Order (EA-09-009,203), in that the site; (1) failed to implement a process to review proposed licensee adverse employment actions at Watts Bar Nuclear plant before actions were taken to determine whether the proposed action comports with employee protection regulations, and whether the proposed actions could negatively impact the SCWE; and (2) failed to implement a process to review proposed significant adverse employment actions by contractors performing services at TVA’s nuclear plant sites before the actions were taken to determine whether the proposed action comports with employee protection regulations, and whether the proposed action could negatively impact the SCWE. Watts Bar failed to comply with the CO because the site failed to implement procedure NPG-SPP-11.10, “Adverse Employment Action”. Specifically, the Vice President (or designee) failed to complete Form 41175, entitled “TVA 41175 Adverse Employment Action Review” as required by Section 3.2.3.D, for multiple adverse employment actions taken against TVA and contractor personnel during this time period. Additionally, the Vice President, Line Management, and HR Representatives did not perform procedural steps that were required by procedure NPG-SPP-11.10, subsection 3.2.2.A, B, C, E, F, and G, and in Section 3.2.3. AV 0500390, 05000391/2016013-03, Failure to Implement Confirmatory Order Requirements for Adverse Employment Action

#### 40A6 Exit Meeting Summary

On November 17, 2016, December 1, 2016, January 11, 2017, and February 21, 2017, the inspectors presented the inspection results to Mr. Simmons and other members of the site staff.

#### 40A7 Licensee-Identified Violations

The following violations of very low safety significance (Green) were identified by the licensee and are violations of NRC requirements which meet the criteria of the NRC Enforcement Policy, for being dispositioned as a Non-Cited Violation.

Technical Specification 3.5.2 Emergency Core Cooling Systems (ECCS) – Operating Condition A required, in part, that while in Mode 1 that if one train becomes inoperable that it be restored to an operable status in 72 hours. Condition B required action to place the unit in Mode 3 in 6 hours and Mode 4 in 12 hours if that train is not restored in 72 hours. Contrary to the above, the Unit 1 1B-B CCP was inoperable from July 24, 2016, until August 5, 2016, in excess of the allowed outage time of Condition A without the unit being placed in Mode 3 in 6 hours and Mode 4 in 12 hours as required by Condition B. This issue was documented in the licensee’s corrective action program as CR 1199024. The finding was screened using IMC 0609 Appendix A, Exhibit 2, “Mitigating Systems Screening Questions,” dated June 19, 2012. The finding required a

detailed risk evaluation because a single train of CCP was inoperable for greater than its allowed outage time. The regional Senior Reactor Analyst reviewed the inspector provided detailed risk evaluation that was performed using the Sapphire SDP module. The finding was determined to be Green.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee personnel:

S. Connors, Watts Bar Plant Manager  
P. Summers, Browns Ferry Director of Safety and Licensing  
B. Dungan, TVA Operations CFAM  
J. Callie, TVA Corporate Developmental Manager  
R. Seipel, Senior Manager, Corporate QA  
D. Tesar, Watts Bar Performance Improvement  
G. Arent, Watts Bar Licensing Manager  
B. J. Allen, Watts Bar Shift Manager  
M. Miller, Watts Bar Shift Manager  
S. Delk, Watts Bar Performance Improvement  
K. McCormick, Watts Bar Human Resources Manager  
I. Hagins-Dyer, TVA Employee Concerns Program Manager

### **LIST OF REPORT ITEMS**

#### Opened

05000390,391/2016013-01	FIN	Failure to Implement the Program Requirement to Enter Issues into the CAP (4OA2.1.c)
05000390,391/2016013-02	NCV	Failure to Provide Accurate Information (4OA5.1.b)
05000390,391/2016013-03	AV	Failure to Implement Confirmatory Order Requirement for Adverse Employment Action (4OA5.2.b)

## LIST OF DOCUMENTS REVIEWED

### Procedures

NPG-SPP-01.7, Nuclear Safety Culture Rev. 3  
NPG-SPP-01.7.1, Employee Concerns Program Rev. 2  
NPG-SPP-01.7.2, Nuclear Safety Culture Monitoring, Rev. 6  
NPG-SPP-01.7.3, Conduct of Nuclear Safety Culture Assessments and Organizational Effectiveness Surveys, Rev. 2  
NPG-SPP-03.19, Conduct of Quality Assurance Internal Audits Rev. 0003  
NPG-SPP-07.2.5, Outage Control Center, Rev. 12  
NPG-SPP-07.2.11, Shutdown Risk Management, Rev. 10  
NPG-SPP 07.3 Work Management Process, Rev. 19  
NPG-SPP-11.10, Adverse Employment Action, Rev. 4 and 5  
NPG-SPP-22.300, Corrective Action Program, Rev. 5 and 6  
NPG-SPP-22.301, Service Request Initiation, Rev. 5  
NPG-SPP-22.302, Corrective Action Program Screening, Rev. 10  
NPG-SPP-22.303, CR Actions, Closures, and Approvals, Rev. 9  
NPG-SPP-22.305, Level 2 Evaluation, Rev. 5  
NPG-SPP-22.306, Level 1 Evaluation, Rev. 5  
NPG-SPP-22.500, Operating Experience Program, Rev 3  
0-MI-0.16, Maintenance Guidelines for Belt Driven Equipment, Rev. 14  
NIEP-GUID-002 Nuclear Industry Evaluation Program Guidelines Rev 7

### Condition Reports

CR 1006456	CR 1111791	CR 1138400	CR 1159529
CR 1022739	CR 1114410	CR 1138406	CR 1159531
CR 1022869	CR 1114975	CR 1138407	CR 1159570
CR 1037157	CR 1116741	CR 1138408	CR 1159574
CR 1038059	CR 1116743	CR 1138411	CR 1159576
CR 1051686	CR 1117683	CR 1138414	CR 1159577
CR 1058300	CR 1117704	CR 1141520	CR 1159579
CR 1064721	CR 1118195	CR 1143483	CR 1159583
CR 1068912	CR 1118632	CR 1144186	CR 1160796
CR 1077284	CR 1120553	CR 1145320	CR 1160910
CR 1078464	CR 1121520	CR 1145455	CR 1162210
CR 1080513	CR 1123625	CR 1148640	CR 1162422
CR 1082102	CR 1125040	CR 1148722	CR 1163150
CR 1082469	CR 1125256	CR 1150853	CR 1163431
CR 1086438	CR 1126079	CR 1151910	CR 1166564
CR 1089482	CR 1127691	CR 1151954	CR 1167102
CR 1090220	CR 1127786	CR 1152029	CR 1167216
CR 1092415	CR 1129322	CR 1152033	CR 1168120
CR 1096405	CR 1131256	CR 1152376	CR 1168996
CR 1096590	CR 1131257	CR 1153507	CR 1168997
CR 1098240	CR 1131261	CR 1155393	CR 1172114
CR 1099011	CR 1133776	CR 1155665	CR 1173130
CR 1105960	CR 1134949	CR 1156304	CR 1173643
CR 1110852	CR 1136395	CR 1159526	CR 1174000



CR 1174328	CR 1192192	CR 1205689	CR 1225006
CR 1174648	CR 1193846	CR 1205697	CR 1225007
CR 1174766	CR 1193848	CR 1205700	CR 1225008
CR 1175968	CR 1196925	CR 1205701	CR 440533
CR 1178230	CR 1198401	CR 1205702	CR 586986
CR 1178855	CR 1198406	CR 1205704	CR 597045
CR 1179264	CR 1198407	CR 1206000	CR 688380
CR 1180094	CR 1199001	CR 1206140	CR 858640
CR 1180388	CR 1199024	CR 1206191	CR 925734
CR 1183115	CR 1201623	CR1209096	CR 962894
CR 1183877	CR 1201749	CR 1214844	CR 967927
CR 1184858	CR 1202562	CR 1215887	CR 967929
CR 1186612	CR 1203785	CR 1216892	CR 970267
CR 1186886	CR 1205684	CR 1225001	CR 984600
CR 1191927	CR 1205685	CR 1225004	

#### Condition Reports Generated

CR 1228949

#### Work Order

116843198

116843219

117375376

#### Self-Assessments & Trends

Contractor review of the RCA for CR 1155393

1028286, WBN-RP-SSA-15-009 snapshot self assessment of PER effectiveness, 05/20/2015

1028291, WBN-RP-SSA-15-009 snapshot self assessment finding, 05/20/2015

1138943, Potential Trend for Training in "Zero Effectiveness" for SA/BMs in trimester, 02/18/2016

1174000, Cognitive Adverse Trend - Station LCO Entries, 5/23/2016

1175070, Trend of reactivity management related issues, 5/25/2016

1175805, Cognitive Adverse Trend - eSOMS violations, 5/27/2016

1139470, Monitoring Trend - PSC Performance, 02/19/2016

1132777, Trend in Engineering CRs being Closed to WOs without a PA focus being applied to the WO, 6/22/2016

1131109, Modification Impact Reviews Performance Improvement Plan, 6/22/2016

1154532, QA ID, Negative trend associated with TI-65 breaches, 03/28/2016

1101733, Adverse Trend for Timeliness of Engineering Operating Experience (OE) Reviews, 11/06/2015

1199378, QA identified - Adverse Trend in OCC Logkeeping, 08/04/2016

QA-WB-16-004, Corrective Action program (Self-Assessment/ Benchmarking, Trending, and OE) Watts Bar Nuclear (WBN) 3/28/16 thru 5/16/16

Other Documents

Apparent Cause Evaluation for CR 1121520, Rev. 0 Inappropriate Management of an Emergent Issue Results in a Challenge to Plant Operation  
 Root Cause Analysis for CR 1127691, Rev. 0 and Rev. 1 Inappropriate Management of an Emergent Issue Results in a Challenge to Plant Operation  
 Root Cause Analysis for CR 1155393, Rev. 0 Chilling Effect Letter Causal Analysis  
 Root Cause Analysis for CR 1206140, Rev. 0 Inappropriate closure of a compensatory measure  
 Root Cause Analysis for CR 1199024, Rev. 0 1BB CCP Room Cooler Shaft and Bearing Degradation  
 Past Operability Evaluation for CR 1199024, Rev. 0  
 CAP Training Manual section on Correcting Behaviors and Behavior Observation Plans  
 Control room and OCC staffing watch bill from November 9, 2015 until November 12, 2015  
 Watts Bar Unit 1 Technical Specifications, Amendment 107  
 Watts Bar Chilling Effect Letter Review Meeting Minutes from July 18, 2016, August 23, 2016, and October 4, 2016  
 Watts Bar Senior Manager mentorship of Shift Managers Program Guidance, Rev. 1  
 Effectiveness Review results from corrective action 1155393-024  
 Employee Concerns Program Conduct of Operations, Rev. 1  
 Gelfond Employee Engagement Survey, dated Summer 2015  
 Gelfond Nuclear Supplement to Employee Engagement Survey, dated Summer 2015  
 Nuclear Safety Culture Monitoring Panel Meeting Minutes, 10/13/2016  
 Nuclear Safety Culture Site Leadership Team Meeting Minutes, 09/07/2016  
 WBN Safety Conscious Work Environment/CEL Refresher Training, Rev. 0  
 Shift Order 16-05, 2/19/16  
 Shift Order 16-15, 8/27/16  
 Shift Order 16-39, 12/27/16

QA Records

NC-WB-14-016 Assessment Report  
 1209096 CR Summary Report  
 1080513 CR Summary Report  
 QA-WB-16-004 CAP Assessment Report  
 QA-WB-15-015 Quality Assurance – Oversight Report  
 QA-WB-14-016 Pre PI and R Assessment Report  
 SSA 1502 CAP Audit Report - WBN  
 SSA 1502 CAP Audit Fleet Comparative Report  
 SSA 1302 WBN CAP Audit Report.  
 SSA 1302 CAP Fleet Comparative Report  
 SSA 1411 NIEP