



Memorandum from the Office of the Inspector General

January 10, 2018

Michael A. Balduzzi, LP 3R-C

**REQUEST FOR FINAL ACTION – EVALUATION 2017-15448 – TVA NUCLEAR'S
PROCESS FOR ADDRESSING THE NUCLEAR REGULATORY COMMISSION'S 2009
CONFIRMATORY ORDER**

Attached is the subject final report for your review and final action. Your written comments, which addressed your management decision and actions planned or taken, have been included in the report. Please notify us when final action is complete. In accordance with the Inspector General Act of 1978, as amended, the Office of the Inspector General is required to report to Congress semiannually regarding evaluations that remain unresolved after 6 months from the date of report issuance.

If you have any questions or wish to discuss our findings, please contact Heather R. Kulisek, Evaluations Manager, at (423) 785-4815 or E. David Willis, Director, Evaluations, at (865) 633-7376. We appreciate the courtesy and cooperation received from your staff during the evaluation.

David P. Wheeler
Assistant Inspector General
(Audits and Evaluations)
ET 3C-K

HRK:FAJ
Attachment

cc (Attachment):

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OIG File No. 2017-15448



Office of the Inspector General

Evaluation Report

To the Senior Vice President,
Generation, and Chief Nuclear
Officer

TVA NUCLEAR'S PROCESS FOR ADDRESSING THE NUCLEAR REGULATORY COMMISSION'S 2009 CONFIRMATORY ORDER

Evaluations Team
Heather R. Kulisek
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Evaluation 2017-15448
January 10, 2018

ABBREVIATIONS

ADR	Alternative Dispute Resolution
Browns Ferry	Browns Ferry Nuclear Plant
CAP	Corrective Action Program
CO	Confirmatory Order
CR	Condition Report
CWEL	Chilled Work Environment Letter
HR	Human Resources
LMS	Learning Management System
NRC	Nuclear Regulatory Commission
PI&R	Problem Identification and Resolution
QA	Quality Assurance
SCWE	Safety Conscious Work Environment
SPP	Standard Programs and Processes
TVA	Tennessee Valley Authority
Watts Bar	Watts Bar Nuclear Plant

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E-MAIL DATED DECEMBER 28, 2017, FROM MICHAEL A. BALDUZZI
TO DAVID P. WHEELER



Evaluation 2017-15448 – TVA Nuclear’s Process for Addressing the Nuclear Regulatory Commission’s 2009 Confirmatory Order

EXECUTIVE SUMMARY

Why the OIG Did This Evaluation

In 2009, the Nuclear Regulatory Commission (NRC) issued a Confirmatory Order (CO) to the Tennessee Valley Authority (TVA) based on the results of two NRC investigations conducted at Browns Ferry Nuclear Plant in 2005 and 2007. The CO documented TVA’s commitments to the NRC as part of a settlement agreement concerning the results of the NRC’s 2005 and 2007 investigations.

In March 2016, The NRC issued a Chilled Work Environment Letter to Watts Bar Nuclear Plant as a result of an investigation that concluded that a chilled work environment existed in the Operations Department because of a perception that operators were not free to raise safety concerns using all available avenues without a fear of retaliation. In response to the Chilled Work Environment Letter, TVA assessed the actions taken in response to the 2009 CO and determined that not all of the actions had been implemented effectively. As a result of the ineffective implementation, we initiated a review of the process TVA used to address the 2009 CO.

What the OIG Found

We concluded there was a weakness in the approach that TVA followed for addressing the 2009 CO. TVA did not have a formal process or procedure directly related to how a CO issued by the NRC should be addressed. TVA’s approach did not assign accountability or provide oversight to govern the implementation and continued execution for ongoing actions.ⁱ A potential contributing cause was TVA’s intent to address the underlying issue only and not to prevent recurrence.

TVA’s approach contributed to the ineffective implementation and/or ongoing execution of five of the ten actions TVA had committed to take in response to the 2009 CO. These actions were related to:

- Incorporating a classroom discussion of the NRC’s employee protection rule and TVA’s policy on safety conscious work environment (SCWE)ⁱⁱ for new supervisors.
- Implementing a process to review proposed adverse employment actions at TVA’s nuclear plants before the proposed actions are taken.

ⁱ For our evaluation purposes, we considered ongoing actions to be actions that had no scheduled end date in the 2009 CO.

ⁱⁱ SCWE is an environment in which employees feel free to raise safety concerns, both to their management and to the NRC, without fear of retaliation.



Evaluation 2017-15448 – TVA Nuclear’s Process for Addressing the Nuclear Regulatory Commission’s 2009 Confirmatory Order

EXECUTIVE SUMMARY

- Providing a presentation regarding TVA’s Concerns Resolution Program and SCWE policy during contractor in-processing sessions.
- Requiring annual computer-based nuclear safety culture training.
- Revising a “One Team, One Fleet, One TVA” booklet to incorporate a discussion of NRC’s employee protection rule.

Although problems were repeatedly identified with the CO actions, TVA’s approach lacked accountability and oversight to ensure the issues were adequately addressed and remediation sustained.

What the OIG Recommends

We recommend the Senior Vice President, Generation, and Chief Nuclear Officer (1) define accountability and oversight roles to ensure CO actions are effectively implemented and executed, (2) require new supervisors who have not taken the appropriate SCWE and employee protection training courses to complete the training, and (3) work with Human Resources to revise Learning Management System controls to make certain all new supervisors receive safety conscious work environment and employee protection training as required.

TVA Management’s Comments

In response to our recommendations, TVA management stated our recommendations were consistent with the actions committed to in a NRC Confirmatory Order issued in July 2017 and will be fully implemented by the dates required in the 2017 CO. See the Appendix for TVA management’s complete response.

Auditor’s Response

We concur with TVA management’s comments and planned actions to address the recommendations.

BACKGROUND

In 2009, the Nuclear Regulatory Commission (NRC) issued a Confirmatory Order (CO) to the Tennessee Valley Authority (TVA) based on the results of two NRC investigations conducted at Browns Ferry Nuclear Plant (Browns Ferry) in 2005 and 2007. This CO was the result of an agreement reached during an Alternative Dispute Resolution (ADR)¹ mediation session between the NRC and TVA. According to TVA personnel, the implications for not conforming to an order can include the NRC issuing a violation and civil penalties.

The 2005 issue involved a contractor who was dismissed from Browns Ferry. The contractor had been critical of the Quality Assurance (QA) program and the contractor's subsequent termination was deemed by the NRC to be due in part to the contractor's criticism of the QA organization. In 2007, a maintenance mechanic was reassigned and had his temporary foreman duties eliminated. The NRC's investigation found that preventing the mechanic from serving as a temporary foreman was connected to his raising concerns about fitness for duty testing. Both incidents were deemed by the NRC to be apparent violations of *Code of Federal Regulations*, Title 10, Part 50.7, Employee Protection.

TVA took numerous actions to address the underlying issues prior to the ADR session with the NRC. Below is a summary of the ten additional actions TVA committed to complete as part of the 2009 CO.

1. Implement a process to review proposed adverse employment actions, within 90 days, at TVA's nuclear plant sites before the proposed actions are actually 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).² Additionally, implement a process to review proposed significant adverse employment actions by contractors performing services at TVA's nuclear plant sites.
2. Within 7 days, communicate TVA's policy, and the expectations of management, regarding the employees' rights to raise concerns without fear of retaliation in the context of the CO.
3. Perform two independent safety culture assessments administered at approximately 2-year intervals by the end of 2013. TVA was to assess and evaluate the results compared with the results of the prior years' surveys, and make the results of each survey and the planned corrective actions available for NRC review within 60 calendar days after the development of the planned corrective actions.

¹ ADR is a general term encompassing various techniques for resolving conflicts using a neutral third party.

² SCWE is an environment in which employees feel free to raise safety concerns, both to their management and to the NRC, without fear of retaliation.

4. Analyze SCWE trends and develop planned actions, as appropriate through the end of 2013.
5. TVA's Office of the General Counsel and Human Resources (HR) were to conduct a lessons learned training session with the manager associated with the apparent violation within 60 days.
6. Conduct "Town Hall" type meetings at least annually through 2013 at its nuclear power plants and corporate office with TVA and contractor employees addressing topics of interest, including a discussion on TVA's policy regarding fostering a SCWE.
7. Incorporate a discussion of NRC's employee protection rule in the next revision of the "One Team, One Fleet, One TVA" booklet³ by the end of 2010.
8. Modify the contractor in-processing program within 90 days to ensure that a TVA representative provides a presentation regarding TVA's Concerns Resolution Program⁴ and SCWE policy during the contractor in-processing sessions.
9. Revise the training program for new supervisors within 90 days to incorporate a classroom discussion of the NRC's employee protection rule and TVA's policy on SCWE.
10. Maintain, through 2013, TVA's annual, online computer-based training course initiative, which discusses the components of a nuclear safety culture,⁵ what is meant by a SCWE, and the avenues available to raise concerns.

In addition, the CO also required that the commitments survive transfer of ownership of the nuclear sites and stated that the commitments were applicable to Browns Ferry, Sequoyah Nuclear Plant, and Watts Bar Nuclear Plant (Watts Bar).

TVA's progress in addressing the actions was periodically reviewed by the NRC during inspections. Several of the actions took multiple reviews to close; however, the NRC closed the final four actions after completing its December 2014 inspection.

In March 2016, the NRC issued a Chilled Work Environment Letter (CWEL) to Watts Bar concluding that a chilled work environment existed in the Operations Department because of a perception that operators were not free to raise safety

³ Books designed to give an aligned overview of the shared values, fundamental principles, and performance tools that contribute to safe and error-free nuclear operations.

⁴ Concerns Resolution Program is currently the Employee Concerns Program that provides an alternate resource to receive concerns and differing views from employees, contractors, and others who support TVA functions.

⁵ Nuclear safety culture is defined as the set of core values and behaviors resulting from a collective commitment by leaders and individuals to emphasize safety over competing goals to ensure protection of people and the environment.

concerns using all available avenues without fear of retaliation. In response to the CWEL, TVA assessed the actions taken to address the 2009 CO and determined that some of the actions were not effectively implemented. As a result of the ineffective implementation, we initiated a review of the process used to address the CO.

OBJECTIVE, SCOPE, AND METHODOLOGY

The objective of our review was to evaluate TVA Nuclear's process for addressing the CO issued by the NRC in 2009. The scope of our review included the actions related to the 2009 CO. To achieve this objective, we:

- Reviewed the 2009 CO to determine the actions TVA committed to and the time frames for completion.
- Interviewed relevant personnel in Nuclear Licensing, Employee Concerns, and other groups to determine the steps TVA took to address the CO.
- Reviewed Condition Reports⁶ (CR) and other related documentation to determine whether the actions agreed to in the 2009 CO were completed as prescribed.
- Compared a list of employees, provided by TVA Nuclear, required to have new supervisor training between January 1, 2015, and August 1, 2017, to the training records in TVA's Learning Management System (LMS) to determine if the employees had completed the course as prescribed by the 2009 CO.
- Reviewed CO related documentation including:
 - TVA Root Cause Analysis related to the Watts Bar Chilled Work Environment and the subsequent revision.
 - Self-Assessments.
 - Watts Bar NRC Problem Identification and Resolution (PI&R) report from March 2017.

This evaluation was performed in accordance with the Council of the Inspectors General on Integrity and Efficiency's *Quality Standards for Inspection and Evaluation*.

FINDINGS

We concluded there was a weakness in the approach that TVA followed for addressing the 2009 CO. TVA did not have a formal process or procedure directly related to how a CO issued by the NRC should be addressed. TVA's approach did not assign accountability or provide oversight to govern the

⁶ A CR is the document used within the TVA corrective action program (CAP) to document how a problem was found, how the problem was analyzed, and how the problem was fixed.

implementation and continued execution for ongoing actions.⁷ A potential contributing cause was TVA's intent to address the underlying issue only and not to prevent recurrence. TVA's approach contributed to the ineffective implementation and/or ongoing execution of five of the ten actions TVA had committed to take in response to the 2009 CO. These actions were related to:

- New supervisor's employee protection and SCWE training (CO action #9).
- Adverse Employment Action Procedure (CO action #1).
- Contractor in-processing sessions (CO action #8).
- Annual computer-based nuclear safety culture training (CO action #10).
- Revision of the "One Team, One Fleet, One TVA" booklet (CO action #7).

Although problems were repeatedly identified with the CO actions, TVA's approach did not ensure the issues were adequately addressed and remediation sustained.

WEAKNESS IN TVA'S APPROACH FOR ADDRESSING THE CO

We concluded there was a weakness in the approach TVA followed for addressing the 2009 CO. TVA did not have a formal process or procedure directly related to how a CO issued by the NRC should be addressed including steps to ensure proper implementation and continued execution for ongoing actions. TVA's intent to address the underlying issue only, and not to prevent recurrence, may have contributed to issues with the ongoing execution of the actions.

While TVA did not have a formal process, according to TVA Nuclear personnel the approach TVA followed was to (1) document the CO in the CAP and in a commitment tracking database, (2) complete the actions as ordered, and (3) assess the completion of the action prior to NRC inspection. TVA Nuclear personnel stated, for the ongoing actions, notes were added to the applicable TVA Standard Programs and Processes (SPP) to prevent future changes. The tracking items were then closed in the commitment tracking database.

In March 2017, the NRC issued TVA an apparent violation for failure to implement the Adverse Employment Procedure required by the 2009 CO. In response to the apparent violation, TVA performed a root cause analysis that found that a "Holistic framework for managing Confirmatory Orders does not exist at TVA." The root cause analysis also stated that "TVA did not ensure cognizance and accountability by TVA Nuclear Management, TVA Support Organizations, and TVA Contractors in application of the 2009 Confirmatory Order." The lack of a formal process or procedure to address CO actions could have contributed to issues not being properly tracked and resolved, resulting in non-compliance with the CO. TVA has committed to revising "corporate and site

⁷ For our evaluation purposes, we considered ongoing actions to be actions that had no scheduled end date in the 2009 CO.

procedures, as appropriate, to ensure that current and future CO requirements continue to be met.”

Another potential contributing factor to TVA’s issues with execution of the CO actions was the intent behind TVA’s approach. TVA’s revised response to the NRC regarding the chilled work environment at Watts Bar stated, in reference to the 2009 CO, that “The actions included in the Confirmatory Order were to address the issues underlying the violations and were not designed to prevent recurrence.” However, NRC Inspection Procedure 92702, “Follow-up on Traditional Enforcement Actions Including Violations, Deviations, Confirmatory Action Letters, Confirmatory Orders, and Alternative Dispute Resolution Confirmatory Orders”, states that part of their inspection objective related to the COs is to:

...verify that the root causes of these enforcement actions have been identified, that their generic implications have been addressed, and that the licensee’s programs and practices have been appropriately enhanced to prevent recurrence.

In addition, the NRC required the actions (unless otherwise specified) to be applied across the entire fleet and several of the actions did not have end dates. Since the underlying issues were only identified at Browns Ferry, requiring the commitments to be applied at all TVA nuclear plants demonstrates the actions were intended to prevent recurrence. Further, several of the actions in the CO (including the Adverse Employment Action Procedure, new supervisor training, and contractor in-processing training) were intended to continue throughout the life of the license, indicating intent to prevent any future employee protection issues from recurring.

INEFFECTIVE IMPLEMENTATION AND ONGOING EXECUTION

Weaknesses in TVA’s process may have contributed to ineffective implementation and/or issues with ongoing execution of five actions committed to in the CO including: (1) new supervisors training; (2) Adverse Employment Action Procedure; (3) contractor in-processing sessions; (4) an annual computer-based nuclear safety culture training course; and (5) revision of the “One Team, One Fleet, One TVA” booklet. TVA self-identified issues with each of the five actions at varying points since the CO was issued.

New Supervisor Training

The 2009 CO required TVA to revise the training program for new supervisors to incorporate a classroom discussion of the NRC’s Employee Protection Rule and TVA’s policy on SCWE. Our review of the new supervisor training found there were gaps in both implementation and ongoing execution of the action. In 2011, TVA identified that there was not a formal process to ensure new supervisors were receiving the classroom training. Also, a 2012 QA audit identified training gaps indicating initial implementation was ineffective. This conclusion differs from what TVA reported to the NRC in 2016. The Effectiveness Review of the

CO actions in response to the CWEL at Watts Bar found the new supervisor training action had been properly implemented. In addition to implementation concerns, we also found current execution concerns that included (1) new supervisors were substituting online training for the classroom training, and (2) not all new supervisors had a requirement in LMS to take the training.

In June 2011, TVA Nuclear found there was not a formal process to schedule new supervisors to receive the training. According to the related CR, a process was established for HR to identify new supervisors and automatically enroll them in the training. As the result of a QA audit in 2012, TVA recognized it had “failed to meet the NRC requirements” when an audit of training and qualifications revealed employees were not up to date on their required new supervisor training. Following the audit, a CR was created to address deficiencies in the training. The actions to address the CR included revising the training program description and ensuring all employees took the required training. In December 2015, TVA closed the CR, indicating these training gaps were closed. In TVA’s 2016 Effectiveness Review of the 2009 CO actions, TVA concluded that the action related to new supervisor training was implemented in a timely way and had been properly implemented. Although TVA stated they would document applicable evidence supporting their findings, they were unable to provide it at our request. According to TVA personnel, the new supervisor training was determined to be effectively implemented because the training was revised to incorporate a classroom discussion of the NRC’s employee protection rule and TVA’s policy on SCWE. However, we concluded failure to ensure new supervisors received the training was evidence of ineffective implementation.

To determine current compliance with the new supervisor training action, we compared a list of 71 employees, provided by TVA Nuclear, required to have new supervisor training between January 1, 2015, and August 1, 2017, to the training records in LMS. We found 33 (approximately 46 percent) of new supervisors required to have the classroom course incorrectly substituted a computer-based version of the class. An incorrect change to the course description allowed computer-based training to be substituted for the required classroom training. After discussions with TVA personnel, a CR was generated to address the change to the course requirement.

We also found 13 of the 71 (approximately 18 percent) new supervisors did not have a requirement in LMS to take the training.⁸ This finding indicates there is a weakness in the controls in place to ensure all new supervisors receive the training.

⁸ All of the 13 employees received either the classroom or online training.

Adverse Employment Action Procedure

The CO required TVA to implement a process to review proposed adverse employment actions at its nuclear plants before the proposed actions are actually taken to determine whether the proposed actions (1) comport with employee protection regulations and (2) could negatively impact the SCWE. Additionally, the CO required TVA to implement a process to review proposed significant adverse employment actions by contractors performing services at its nuclear plants.

The implementation process for the Adverse Employment Action Procedure and the actions taken to address identified issues following implementation did not adequately address problems with the procedure. In the inspection completed in December 2010, the NRC raised concerns about the content of the procedure. While this action was closed during the NRC inspection completed in December 2012, multiple CRs and assessments continued to identify issues with the procedure. Figure 1 below summarizes the assessments conducted on the Adverse Employment Procedure following the closure of the related action by the NRC.

Figure 1: Assessments of Adverse Employment Actions and the Procedure

Date	Source	Assessment
2013	TVA's Apparent Cause Evaluation related to an adverse trend across the fleet related to the process.	Adverse Employment Action procedure had not been implemented consistently across the fleet.
2014	TVA's Self- Assessment prior to the NRC Inspection.	"While a procedure was developed and issued for evaluating adverse employee actions, the process has not been effectively nor consistently implemented since it was first issued in March 2010" and that "corrective actions taken to date had not been effective."
2014	NRC Exit Meeting for the Follow-Up Review of the Procedure.	"Implementation problems with the Confirmatory Order actions had been previously identified by TVA and documented in the CAP. TVA is not using the Adverse Employment Action tool to its full benefit. Benchmarking to improve the process is warranted. The existing process is not robust."
2016	TVA Nuclear's Audit covering Adverse Employment Actions in 2016.	The adverse employment audit team performed a random sample of 85 adverse actions that identified 20 actions meeting the screening criteria for potentially needing a chilling effect mitigation. However, the audit determined that no chilling effect mitigation plans were actually completed.

2016	TVA Nuclear's Audit of Adverse Employment Actions after changes implemented following the CWEL.	The audit found (1) Watts Bar had not effectively implemented the Adverse Employment Action procedure and process, (2) Sequoyah Nuclear Plant had some lapses in rigor, and (3) Browns Ferry is implementing the Adverse Employment Action in accordance with the procedure and process.
2017	TVA's Watts Bar Failure to Implement Adverse Employment Action Process Root Cause Analysis.	TVA leveraged an existing industry procedure when developing the Adverse Employment Action process without appropriate consideration for the scope and the intent of the 2009 CO.
2017	NRC PI&R Inspection (Part 2) and SCWE Issue of Concern Follow-Up.	The NRC identified an Apparent Violation of the 2009 CO for failure to implement the Adverse Employment Action Procedure action.

The NRC's recent Watts Bar PI&R team inspection, completed in December 2016, "identified that TVA's Watts Bar Nuclear . . . facility was not implementing certain review processes required in the CO in accordance with an implementing procedure, from November 2014 to August 2016." Problems with the procedure were repeatedly identified, but without a formal framework or process to assign accountability and govern the implementation of the procedure, the issues were not adequately addressed with the Adverse Employment Action Procedure.

Contractor In-Processing Sessions

The CO required TVA to provide a presentation regarding the Concerns Resolution Program and TVA's SCWE policy during contractor in-processing sessions. The action was closed by the NRC following the December 2010 inspection; however, the training was discontinued in July 2016. TVA identified in May 2017 there was no training to address the requirement. According to TVA, a new computer-based training was implemented and assigned to all nuclear contractors to address the deficiency.

The SPP related to this training, SPP-1.10, Access Authorization, did have a note indicating this training was required by the 2009 CO (as was part of the approach used by TVA for ongoing actions discussed above). A note indicating training was required by the CO was not an adequate measure to prevent the training from being removed.

Annual Computer-Based Nuclear Safety Culture Training

The CO required TVA to maintain its annual online, computer-based training course initiative, which discusses the components of a nuclear safety culture, SCWE, and the avenues available to raise concerns through 2013. TVA's QA group found "records for calendar year 2011 identified numerous personnel in various departments and at various locations did not receive this training." In January 2013, TVA found several individuals had training that was past due. It was acknowledged in the resulting CR that "Failure to maintain this annual required training is in violation of the Confirmatory Order."

“One Team, One Fleet, One TVA” Booklet

A discussion of NRC’s employee protection rule was incorporated into the “One Team, One Fleet, One TVA” booklet as required by the 2009 CO. According to the 2016 Effectiveness Review this book was disseminated until it was discontinued in 2013. In the related CR generated after the Effectiveness Review, TVA concluded that it had continued to provide information to employees regarding the employee protection rule and that this effort is an adequate substitution for the information contained in the "One Team, One Fleet, One TVA" booklet.

CONCLUSION

Of the ten actions TVA committed to complete as part of the 2009 CO, five had ineffective implementation and/or ongoing execution. The approach used by TVA to address the CO did not ensure proper implementation and sustainability of the actions. Problems were repeatedly identified with the CO actions but the approach lacked accountability and oversight to ensure the issues were adequately addressed and remediation sustained.

RECOMMENDATIONS

We recommend the Senior Vice President, Generation, and Chief Nuclear Officer:

- Define accountability and oversight roles to ensure CO actions are effectively implemented and executed.
- Require new supervisors who have not taken the appropriate SCWE and employee protection training courses to complete the training.
- Work with HR to revise LMS controls to make certain all new supervisors receive SCWE and employee protection training as required.

TVA Management’s Comments – In response to our recommendations, TVA management stated our recommendations were consistent with the actions committed to in a NRC CO issued in July 2017 and will be fully implemented by the dates required in the 2017 CO. These actions included implementing a process for managing COs and requiring supervisor training. See the Appendix for TVA management’s complete response.

Auditor’s Response – We concur with TVA management’s comments and planned actions to address the recommendations.

From: Balduzzi, Michael Anthony
Date: Thursday, December 28, 2017 at 12:06:40 PM
To: Wheeler, David P.
Cc: Dickens, Robertson Dale, Grimes, Joe Patrick, Lanier, Dwain Kendrick, Meade, Melissa A
Subject: Request for Comments - Draft Evaluation 2017-15448 - TVA Nuclear's Process for Addressing the Nuclear Regulatory Commission's 2009 Confirmatory Order

David,

TVA has had the opportunity to review the Office of the Inspector General (OIG) evaluation focused on TVA Nuclear's process for addressing the Nuclear Regulatory Commission's (NRC) 2009 Confirmatory Order, Evaluation 2017-15448. Thank you for your review and feedback; we appreciate the OIG's insights.

In the report, the OIG made three recommendations. Those recommendations included defining accountability and oversight roles to ensure confirmatory orders are effectively implemented, requiring Safety Conscious Work Environment (SCWE) training for new supervisors, and working with Human Resources (HR) to ensure there are adequate LMS controls so new supervisors receive the required SCWE training.

TVA had previously identified issues regarding TVA's implementation of the 2009 Confirmatory Order. On April 22, 2016, TVA responded to NRC concerning a chilled work environment for raising and addressing safety concerns at the Watts Bar Nuclear Plant. The letter documented, among other things, that TVA had identified gaps in implementation of the 2009 Confirmatory Order. TVA took action in response to the identified gaps at this time.

On March 10, 2017, the NRC issued an Apparent Violation for TVA's failure to comply with the Confirmatory Order (EA-09-009-203). To thoroughly understand the extent of the issues with compliance, TVA initiated a root cause investigation to specifically address failure to comply with the 2009 Order. The analysis identified two root causes:

- TVA did not ensure cognizance and accountability by TVA Nuclear Management, TVA Support Organizations, and TVA Contractors in application of the 2009 Confirmatory Order. The accountability failure was the lack of a governance, oversight, execution, and support process and management structure to cross-organizationally implement the Adverse Employment Action process.
- TVA focused the Adverse Employment Action process primarily on the employee's protected activity and not organizational SCWE missing the full breadth and intent of the 2009 Confirmatory Order.

Additionally, the analysis identified four contributing causes including, a "Holistic framework for managing Confirmatory Orders does not exist at TVA."

As part of our analysis of the event, the root cause team reviewed historical Condition Reports to gain insight into implementation of the Order requirements. During this review, the root cause team identified shortfalls in implementation. These issues were individually addressed in accordance with our corrective action program.

In June 2017, TVA entered into Alternative Dispute Resolution (ADR) to address the apparent violation. As the NRC documented in Confirmatory Order EA-17-022 on July 27, 2017, TVA committed to a number of actions in several areas including Communications, Training, Independent Oversight, and Assessing and Monitoring Nuclear Safety Culture. The actions to which TVA committed in June 2017, address the Recommendations of the OIG. Specifically, the OIG Recommendations are consistent with the following actions documented in EA-17-022 and will be completed per the timelines outlined in the Confirmatory Order:

- OIG Recommendation 1 is consistent with CO Commitment 1.f.1.b. which requires TVA to implement a process for managing confirmatory orders.
- OIG Recommendation 2 is consistent with the training requirements in 1.b.3. which requires supervisory training.
- OIG Recommendation 3 is consistent with the requirements in 1.b.3 which will require alignment between HR and LMS to ensure all new supervisors receive training within their first 3 months.

Additionally, because TVA identified programmatic weaknesses in management of Confirmatory Orders, TVA committed to completing a review of all Confirmatory Orders issued to TVA. TVA submitted the results of that review to the NRC on December 27, 2017. Again, thank you for your review and feedback. As discussed above, actions to address the recommendations are well underway and will be fully implemented per the dates required by the Confirmatory Order.

Please contact me or Melissa Meade if you have any questions.

Mike