



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
1600 EAST LAMAR BOULEVARD  
ARLINGTON, TEXAS 76011-4511

February 22, 2018

Ken J. Peters, Senior Vice President  
and Chief Nuclear Officer  
Attention: Regulatory Affairs  
Vistra Operations Company LLC  
P.O. Box 1002  
Glen Rose, TX 76043

SUBJECT: COMANCHE PEAK NUCLEAR POWER PLANT, UNITS 1 AND 2 – NRC  
PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT  
05000445/2017010 AND 05000446/2017010 - AND NOTICE OF VIOLATION

Dear Mr. Peters:

On December 14, 2017, the U.S. Nuclear Regulatory Commission (NRC) completed a Problem Identification and Resolution inspection at your Comanche Peak Nuclear Power Plant, Units 1 and 2, and discussed the results of this inspection with you and other members of your staff. The results of this inspection are documented in the enclosed report.

The NRC inspection team reviewed the station's corrective action program and the station's implementation of the program 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. Based on the samples reviewed, the team determined that your staff's performance in each of these areas supported nuclear safety.

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 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. Based on the team's observations and the results of these interviews, the team found no evidence of challenges to your organization's safety-conscious work environment. Your employees were willing to raise nuclear safety concerns through at least one of the several means available.

NRC inspectors documented three findings of very low safety significance (Green) in this report. These findings involved violations of NRC requirements. The NRC is treating two of these violations as non-cited violations (NCVs) consistent with Section 2.3.2.a of the Enforcement Policy.

The third finding is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it are discussed in the enclosed report as a Severity Level IV violation. The NRC evaluated this violation in accordance Section 2.3.2.a of the NRC Enforcement Policy, which can be found at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. The violation is being cited because it did not meet the criteria to be treated as an NCV. The violation was previously identified by the NRC as NCV 05000445/2016007-01 and 05000446/2016007-01 and the licensee failed to take adequate corrective actions to restore compliance.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. If you have additional information that you believe the NRC should consider, you may provide it in your response to the Notice. The NRC's review of your response will also determine whether further enforcement action is necessary to ensure your compliance with regulatory requirements.

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 IV; the Director, Office of Enforcement; and the NRC resident inspector at the Comanche Peak Nuclear Power Plant, Units 1 and 2.

If you disagree with a cross-cutting aspect assignment 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 IV; and the NRC resident inspector at the Comanche Peak Nuclear Power Plant, Units 1 and 2.

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

Sincerely,

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Jeff Clark, Deputy Director  
Division of Reactor Safety

Docket Nos. 50-445 and 50-446  
License Nos. NPF-87 and NPF-89

Enclosures:

1. Notice of Violation
2. Inspection Report 05000445/2017010  
and 05000446/2017010  
w/ Attachments:
  1. Supplemental Information
  2. Information Request

## NOTICE OF VIOLATION

Vistra Operations Company, LLC  
Comanche Peak Nuclear Power Plant, Units 1 and 2

Docket Nos. 50-445; 50-446  
License Nos. NPF-87; NPF-89

During a NRC inspection conducted November 27 – December 14, 2017, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

10 CFR 50.71(e) requires, in part, that a licensee, “Shall update periodically the final safety analysis report, to assure that the information included in the report contains the latest information developed. The submittal shall include the effects of all changes made in the facility in support of conclusions that changes did not require a license amendment in accordance with 10 CFR 50.59 (c)(2).”

Contrary to the above, from October 28, 2016, to November 27, 2017, the licensee failed to update the final safety analysis report to assure that the information included in the report contains the latest information developed; and failed to include the effects of changes made to the facility that did not require a license amendment. Specifically, the licensee did not include the effects of changes to the K300 voltage relay setpoint or the safety evaluation in submittals to the Final Safety Analysis Report, Section 8.3.1.1.11, that supported the conclusion that the changes did not require a license amendment.

This is a Severity Level IV violation (NRC Enforcement Policy Section 6.1.d.3).

Pursuant to the provisions of 10 CFR 2.201 Vistra Operations Company LLC is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Regional Administrator, Region IV, 1600 E. Lamar Blvd, Arlington, Texas 76011, and a copy to the NRC Resident Inspector at the Comanche Peak Nuclear Power Plant, Units 1 and 2, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a, “Reply to a Notice of Violation,” and should include for each violation: (1) the reason for the violation, or if contested, the basis for disputing the violation or severity level; (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 previous docketed correspondence, if the correspondence adequately addresses the required response.

If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

Your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected, and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b), to support a request for withholding confidential commercial or financial information).

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days of receipt.

Dated this 22 day of February 2018

**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION IV**

Docket(s): 05000445; 05000446

License: NPF-87; NPF-89

Report: 05000445/2017010; 05000446/2017010

Licensee: Vistra Operations Company LLC

Facility: Comanche Peak Nuclear Power Plant, Units 1 and 2

Location: 6322 N. FM-56, Glen Rose, Texas

Dates: November 27 through December 14, 2017

Team Lead: Ray Azua, Senior Reactor Inspector

Inspectors: R. Kumana, Resident Inspector  
P. Jayroe, Reactor Inspector  
E. Uribe, Reactor Inspector

Approved By: Thomas R. Hipschman, Team Leader  
Inspection Program and Assessment Team  
Division of Reactor Safety

## SUMMARY

IR 05000445/2017010; 05000446/2017010; 11/27/2017 – 12/14/2017; Comanche Peak Nuclear Power Plant, Units 1 and 2; Problem Identification and Resolution (Biennial)

The inspection activities described in this report were performed between November 27 and December 14, 2017, by three inspectors from the NRC's Region IV office and the resident inspector at Comanche Peak Nuclear Power Plant, Units 1 and 2. The report documents three findings of very low safety significance (Green). These findings involved violations of NRC requirements; one of these violations was determined to be Severity Level IV under the traditional enforcement process. The significance of inspection findings is indicated by their color (Green, White, Yellow, or Red), which is determined using Inspection Manual Chapter 0609, "Significance Determination Process." Their cross-cutting aspects are determined using Inspection Manual Chapter 0310, "Aspects Within the Cross-Cutting Areas." Violations of NRC requirements are dispositioned in accordance with the NRC Enforcement Policy. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process."

### Assessment of Problem Identification and Resolution

The NRC inspection team reviewed the station's corrective action program and the station's implementation of the program 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. Based on the samples reviewed, the team determined that the licensee's performance in each of these areas supported nuclear safety.

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 the licensee's performance in each of these areas 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. Based on the team's observations and the results of these interviews, the team found no evidence of challenges to plant organization's safety-conscious work environment. Licensee employees were willing to raise nuclear safety concerns through at least one of the several means available.

### Cornerstone: Mitigating Systems

- Green. The team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to accomplish activities affecting quality in accordance with approved procedures adequate to the circumstances. Specifically, the teams identified 36 examples where the plant failed to follow their procedures for correcting conditions adverse to quality. The licensee documented this issue in Condition Report CR-2017-012222.

The licensee's failure to follow their Procedure STI-421.02, a quality related procedure, was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because if left uncorrected, it could lead to more significant safety

concerns. Specifically, the failure to properly screen conditions adverse to quality into the licensee's corrective action program could result in further degradation in safety-related components or failure to take required corrective actions. The finding was associated with the Mitigating Systems cornerstone because the majority of conditions were associated with mitigating systems. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," dated October 7, 2016, and Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," the team determined the finding was of very low safety significance (Green) because although the conditions were deficiencies affecting the design or qualification of a mitigating structure, system, or component, the systems were all evaluated as being operable. The team determined the finding had a human performance cross-cutting aspect of H.3 change management, because the licensee failed to ensure that the change in the corrective action program was managed in a way to ensure nuclear safety was the overriding priority (Section 4OA2.5.c)

- Green. The team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for the failure to promptly identify and correct a condition adverse to quality. Specifically, the licensee failed to correct a condition adverse to quality effectively and in a timely manner related to the degrading and non-conforming condition of the fiber optic cables used in the Diesel Generator Automatic Voltage Regulator Circuits, which affected the diesel generators reliability to perform one of its safety functions. The licensee entered this issue into their corrective action program as Condition Report CR-2017-013488.

The licensee's failure to replace and/or appropriately cut the ends of the fiber optic cables in the Automatic Voltage Regulator communication circuit, to correct a condition adverse to quality, was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to correct a degraded and non-conforming condition caused by fiber optic cutting methods and optical cable age-degradation for the Automatic Voltage Regulators, affected the reliability of the site's diesel generators to perform one of their safety functions. The team determined the finding had a human performance cross-cutting aspect of H.5 work management, because the licensee failed to ensure that defined corrective actions were implemented in a timely manner (Section 4OA2.5.b)

### **Other Findings and Violations**

- VIQ. The team identified a Severity Level IV violation for the failure to comply with the requirements of 10 CFR 50.71(e). Specifically, the licensee failed to update Section 8.3.1.1.11 of the final safety analysis report following the revision of the settings of diesel generators K300 voltage relay. The licensee entered this issue into their corrective action program as Condition Report CR-2017-013071.

The licensee's failure to initiate a Licensing Document Change Request, in accordance with Procedure STA-116, "Maintenance of CPNPP Licensing Basis Documents, Operating License conditions and Technical Specifications," Revision 14, Instruction 6.1, to update the Final Safety Analysis Report, Section 8.3.1.1.11, for the setpoint revision

of the K300 voltage relays was a performance deficiency. This violation was evaluated using the traditional enforcement process because it had the potential for affecting the NRC's ability to perform its regulatory oversight function. This violation was determined to be a Severity Level IV violation, consistent with Section 6.1.d.3 of the NRC Enforcement Policy. Specifically, the licensee failed to update the final safety analysis report as required by 10 CFR 50.71(e), but the lack of up-to-date information has not resulted in any unacceptable change to the facility or procedures. The team determined that this violation did not have a cross-cutting aspect because traditional enforcement violations are not assessed for cross-cutting aspects (40A2.5.a)



## REPORT DETAILS

### 4. OTHER ACTIVITIES (OA)

#### 4OA2 Problem Identification and Resolution (71152)

The team based the following conclusions on a sample of corrective action documents that were open during the assessment period, which ranged from October 1, 2015, to the end of the on-site portion of this inspection on December 13, 2017.

##### .1 **Assessment of the Corrective Action Program Effectiveness**

###### a. Inspection Scope

The team reviewed approximately 200 condition reports (CRs), including associated root cause analyses and apparent cause evaluations, from approximately 6,000 that the licensee had initiated or closed between October 1, 2015, and December 13, 2017. The majority of these (approximately 6,000) were lower-level CRs that did not require cause evaluations. The inspection sample focused on higher-significance CRs for which the licensee evaluated and took actions to address the cause of the condition. In performing its review, the team evaluated whether the licensee had properly identified, characterized, and entered issues into the corrective action program, and whether the licensee had appropriately evaluated and resolved the issues in accordance with established programs, processes, and procedures. The team also reviewed these programs, processes, and procedures to determine if any issues existed that may impair their effectiveness.

The team reviewed a sample of performance metrics, system health reports, operability determinations, self-assessments, trending reports and metrics, and various other documents related to the licensee's corrective action program. The team evaluated the licensee's efforts in determining the scope of problems by reviewing selected logs, work orders, self-assessment results, audits, system health reports, action plans, and results from surveillance tests and preventive maintenance tasks. The team reviewed daily CRs and attended the licensee's Station Ownership Committee meetings to assess the reporting threshold and prioritization efforts, and to observe the corrective action program's interfaces with the operability assessment and work control processes. The team's review included an evaluation of whether the licensee considered the full extent of cause and extent of condition for identified problems, as well as a review of how the licensee assessed generic implications and previous occurrences of issues. The team assessed the timeliness and effectiveness of corrective actions, completed or planned, and looked for additional examples of problems similar to those the licensee had previously addressed. The team conducted interviews with plant personnel to identify whether other processes exist where problems may be identified and addressed outside the corrective action program.

The team reviewed corrective action documents that addressed past NRC-identified violations to evaluate whether corrective actions addressed the issues described in the inspection reports (IRs). The team reviewed a sample of corrective actions closed to other corrective action documents to ensure that the ultimate corrective actions remained appropriate and timely. The team reviewed a sample of 25 CRs where the

licensee had changed the significance level after initial classification to determine whether the level changes were in accordance with station procedure and that the conditions were appropriately addressed.

The team considered risk insights from both the NRC's and the licensee's risk models to focus the sample selection and plant tours on risk-significant systems and components. The team focused a portion of its sample on the plants diesel generators (DGs) control systems, which the team selected for a five-year in-depth review. The team conducted walk-downs of this system and other plant areas to assess whether licensee personnel identified problems at a low threshold and entered them into the corrective action program.

b. Assessments

1. Effectiveness of Problem Identification

During the 25-month inspection period, licensee staff generated approximately 6,000 CRs. The team determined that most conditions that required generation of a CR by Procedures STA-421, "Control of Issue Reports," STA-422, "Corrective Action Program," and 422.01, "Processing of Condition Reports," had been appropriately entered into the corrective action program. However, in August 2016 the licensee revised their corrective action program procedures to implement new industry initiatives to reduce unnecessary effort to correct conditions that did not meet regulatory requirements for correction. The licensee introduced a new program to track issues that they determined did not require correction under their corrective action program. In October 2017 the licensee further modified their corrective action program and associated procedures to streamline the corrective action program. This modification involved a change to the licensee's definition of "condition adverse to quality" (CAQ). The licensee implemented this guidance through procedure revisions and training of their staff. Presently, the process for identifying plant issues remains a single point entry system. However, plant issues are now initially documented in Issue Reports (IRs) and not CRs, as they previously had been. These IRs are then evaluated to determine if these issues rise to the level of a CAQ. Once an item is determined to be a CAQ, the IR is converted to a CR and the issue is tracked in the Corrective Action Program (CAP). If the issue is not determined to be a CAQ, the IR is converted to a tracking report (TR), which is not tracked within the CAP, but is tracked separately, outside the CAP. This explains the difference in the number of CRs initiated prior to this inspection compared to those initiated prior to the previous Problem Identification and Resolution (2015) inspection (6,000 vs. 23,500 respectively).

Overall, the team concluded that the licensee maintained a low threshold for the formal identification of problems and entry into the IR program for evaluation, with subsequent appropriate distribution into either the CAP or TR program. During the inspection period, licensee personnel initiated over 210 IR's per month, that were subsequently converted to CR's. Most of the personnel interviewed by the team understood the requirements for IR initiation; most expressed a willingness to enter newly identified issues into the IR system at a very low threshold.

The team, however, discovered seven IRs documenting conditions adverse to quality that had been screened out of the CAP. The team reviewed the conditions with the licensee, and the licensee discovered 29 additional examples over the previous 2-weeks that had been incorrectly screened out of the CAP. Ultimately, 36 examples of conditions adverse to quality were found to have been incorrectly screened out of the corrective action program over a 3-week period. The licensee documented this issue in Condition Report CR-2017-012222. This performance deficiency is documented in Section 4OA2.5.b, "Findings," of this report.

## 2. Effectiveness of Prioritization and Evaluation of Issues

The sample of CRs reviewed by the team focused primarily on issues screened by the licensee as having higher-level significance, including those that received cause evaluations, those classified as significant conditions adverse to quality, and those that required engineering evaluations. The team also reviewed a number of CRs that included or should have included immediate operability determinations to assess the quality, timeliness, and prioritization of these determinations.

As part of this inspection, the team selected the DGs control systems for a focused review within the corrective action program. For this system, we performed sample selections of IRs and CRs, looking at the adequacy of the evaluation process for determining which items are placed in the corrective actions process and the corrective actions taken. We also reviewed your use of operational experience and the 10 CFR Part 21 process with respect to this system. Finally, we performed walkdowns of accessible portions of this system.

Based on these walkdowns, the material condition of this system had been maintained. With regard to this system, it was noted that the plant experienced a number of recurring issues, over several years, where corrective actions were previously ineffective.

As part of this review, the team identified that the goals that the licensee established to address fuel oil and jacket water issues, were working, while reliability regarding the automatic voltage regulator (AVR) continued to be a concern. The team spoke with the responsible system engineer regarding the obsolescence issues with the voltage regulator, master drive units, and learned that the site is aware of the problem and is developing a strategy to replace them.

The site has experienced a number of reliability issues regarding the voltage regulator, master drive units with a number of corrective actions requiring repairs to the fiber optic cables used for communication between serial boards. Although the installation of this digital AVR was unique to the nuclear fleet, there was a lack of research regarding operating experience for the master drive issues. As shown by actual circuit failures, a number of corrective actions were developed, yet no corrections had been taken to correct the condition that affected the reliability of the component to perform its function. For example, the failure of the digital AVR was determined to be caused, in part, due to the age of the optical cable and also due to the cable cutting methods. However, cable replacement for cables that exceeded the time specified in the new preventative maintenance (PM) plan had not been performed. In addition, the optical cables were not cut, using the newly procured tool. This has been captured in Condition Report CR-2017-013488.

Overall, the team determined that the licensee's process for screening and prioritizing issues that had been entered into the corrective action program supported nuclear safety. The licensee's operability determinations were consistent, accurately documented, and completed in accordance with procedures.

### 3. Effectiveness of Corrective Actions

In general, the corrective actions identified by the licensee to address adverse conditions were effective.

Overall, the team concluded that the licensee identified effective corrective actions for the problems evaluated in the corrective action program. The licensee implemented these corrective actions in a timely manner, commensurate with their safety significance, and reviewed the effectiveness of the corrective actions appropriately.

## .2 **Assessment of the Use of Operating Experience**

### a. Inspection Scope

The team examined the licensee's program for reviewing industry operating experience, including reviewing the governing procedures. The team reviewed a sample of industry operating experience communications including 10 CFR Part 21 notifications and other vendor correspondence, NRC generic communications, and publications from various industry groups including Institute of Nuclear Power Operations (INPO) and Electric Power Research Institute. The team reviewed the site's evaluations to assess whether the licensee had appropriately assessed the communications for relevance to the facility. The team also reviewed assigned actions to determine whether they were appropriate.

### b. Assessment

Overall, the team determined that the licensee appropriately evaluated industry-operating experience for its relevance to the facility. Operating experience information was incorporated into plant procedures and processes as appropriate.

The team further determined that the licensee appropriately evaluated industry-operating experience when performing cause evaluations. The licensee appropriately incorporated both internal and external operating experience into lessons learned for training and pre-job briefs.

## .3 **Assessment of Self-Assessments and Audits**

### a. Inspection Scope

The team reviewed a sample of licensee self-assessments and audits to assess whether the licensee was regularly identifying performance trends and effectively addressing them. The team also reviewed audit reports to assess the effectiveness of assessments in specific areas. The specific self-assessment documents and audits reviewed are listed in Attachment 1.

b. Assessment

Overall, the team concluded that the licensee had an effective self-assessment and audit process. The team determined that self-assessments were self-critical and thorough enough to identify deficiencies.

**.4 Assessment of Safety-Conscious Work Environment**

a. Inspection Scope

The team interviewed 40 individuals in 6 focus groups. The purpose of these interviews was (1) to evaluate the willingness of licensee staff to raise nuclear safety issues, either by initiating a CR or by another method; (2) to evaluate the perceived effectiveness of the corrective action program at resolving identified problems; and (3) to evaluate the licensee's safety-conscious work environment (SCWE). The focus group participants included personnel from operations, mechanical and electrical maintenance, instrumentation and controls, engineering, security, and fire-watch. At the team's request, the licensee's regulatory affairs staff selected the participants at random from these work groups, based partially on availability. To supplement these focus group discussions, the team interviewed the employee concerns (Safe Team) program manager to assess his perception of the site employees' willingness to raise nuclear safety concerns. The team reviewed the Safe Team Program case log and select case files.

b. Assessment

1. Willingness to Raise Nuclear Safety Issues

All individuals interviewed indicated that they would raise nuclear safety concerns. All felt that their management was receptive to nuclear safety concerns and was willing to address them promptly. All of the interviewees further stated that if they were not satisfied with the response from their immediate supervisor, they had the ability to escalate the concern to a higher organizational level. Most expressed positive experiences after raising issues to their supervisors. All expressed positive experiences documenting most issues in CRs.

2. Employee Concerns (Safe Team) Program

All interviewees were aware of the Safe Team Program. Most explained that they had heard about the program through various means, such as posters, training, presentations, and discussion by supervisors or management at meetings. All interviewees stated that they would use Safe Team if they felt it was necessary. All had expressed confidence that their confidentiality would be maintained if they brought issues to the safe team.

3. Preventing or Mitigating Perceptions of Retaliation

When asked if there have been any instances where individuals experienced retaliation or other negative reaction for raising issues, all individuals interviewed stated that they had neither experienced nor heard of an instance of retaliation,

harassment, intimidation, or discrimination at the site. The team determined that the processes in place to mitigate these issues were being successfully implemented.

## **.5 Findings**

### **a. Failure to Update Final Safety Analysis Report, Section 8.3.1.1.11**

Introduction. The team identified a Severity Level IV violation for the failure to comply with the requirements of 10 CFR 50.71(e). Specifically, the licensee failed to update Section 8.3.1.1.11 of the final safety analysis report (FSAR) following the revision of the settings of DGs K300 voltage relay.

Description. The DGs voltage is required to be maintained within Technical Specification 3.8.1 limits of 6480 – 7150 V. Plant DGs output voltage is maintained by a voltage regulator/exciter. Between 2003 and 2005 the licensee replaced their DG analog voltage regulators with digital AVR. In order to maintain defense-in-depth and diversity in the event of a software common mode failure, a non-digital, safety-related voltage monitoring device (K300 relay) was included to detect diesel generator steady state voltage and switch from AVR voltage control to magnetic voltage regulation in the event of an AVR failure which resulted in steady state voltage outside of the technical specification limits of 6480-7150 volts.

In 2012 the K300 relay setpoints were changed to prevent spurious trips of the AVR during grid-parallel operations in which grid voltage fluctuations could cause voltages to exceed the K300 relay setpoints and isolate a normally operating AVR. The new K300 relay setpoints created a condition, which could allow operation outside of technical specification voltage limits without isolating the AVR and switching to magnetic voltage regulation. The modification revised the K300 relay under voltage nominal setting to 6447.6 V with a setting range of 6415 – 6480 V, and over voltage nominal setting to 7185.75 V with a setting range of 7150 – 7222 V.

The licensee performed a 10 CFR 50.59 screening in support of this modification to determine if a license amendment would be required. The 10 CFR 50.59 screen indicated that the condition imposed by the K300 relay setpoint change involved a change to a mitigating structure, system, or component (SSC) that adversely affected a FSAR described function and that further evaluation under 10 CFR 50.59 was warranted. The new K300 relay setpoints replaced the original setpoints, which were intended to maintain DG steady state voltage within technical specification limits. The modification's 10 CFR 50.59 screen 59SC-2012-000121-01-00 recognized that the changes to the K300 voltage relay setpoints would place the DG in range of operation outside of technical specification limits, which was adverse to the Final Safety Analysis Report, Section 8.3.1.1.11. The licensee then evaluated the change under revised 10 CFR 50.59 evaluation 59EV-2001-001255-01-01, ultimately determining, appropriately, that the change could be made without obtaining a license amendment.

Subsequent to the change, however, the licensee failed to create a licensing documentation change request to reflect the change in the FSAR. This was a failure to implement Procedure STA-116, "Maintenance of CPNPP Licensing Basis Documents, Operating License conditions and Technical Specifications," Revision 14, Instruction 6.1.

The Comanche Peak Nuclear Power Plant, Final Safety Analysis Report, Section 8.3.1.1.11, states, "If Diesel Generator voltage goes outside the desired limits, the digital control system is automatically disconnected. The controller then operates in isochronous mode with the magnetics portion of the system maintaining the Diesel Generator voltage within the technical specification limits." The licensee's FSAR was not revised after implementation of the modification to reflect that the new K300 relay setpoints could allow steady state DG operation outside of technical specification limits in the event of a software common mode failure of the AVR. This failure to update the FSAR was originally identified by NRC inspectors during a 2016 plant modification inspection (Inspection Reports 05000445/2016007 and 05000446/2016007); however, the condition was not corrected and the associated CR initiated to address the issue was closed with no relevant licensing basis documentation changes. The licensee had no plans for submittal of this change in future FSAR revisions.

Analysis. The team determined that the licensee's failure to initiate a Licensing Document Change Request, in accordance with Procedure STA-116, "Maintenance of CPNPP Licensing Basis Documents, Operating License Conditions and Technical Specifications," Revision 14, Instruction 6.1, to update the Final Safety Analysis Report, Section 8.3.1.1.11, for the setpoint revision of the K300 voltage relays was a performance deficiency. This violation was evaluated using the traditional enforcement process because it had the potential for affecting the NRC's ability to perform its regulatory oversight function. The reactor oversight process's significance determination process does not consider violations that affect the NRC's regulatory oversight function. This violation was determined to be a Severity Level IV violation, consistent with the example in Section 6.1.d.3 of the NRC Enforcement Policy. Specifically, the licensee failed to update the FSAR as required by 10 CFR 50.71(e), but the lack of up-to-date information has not resulted in any unacceptable change to the facility or procedures. The team determined that this violation did not have a cross-cutting aspect because traditional enforcement violations are not assessed for cross-cutting aspects.

Enforcement. The team identified a Severity Level IV violation of 10 CFR 50.71(e) which requires, in part, that the licensee shall update periodically the FSAR to assure that information included in the report contains the latest information developed. The submittal shall include the effects of all changes made in the facility in support of conclusions that changes did not require a license amendment in accordance with 10 CFR 50.59(c)(2). Contrary to the above, from October 28, 2016, to November 27, 2017, the licensee failed to update periodically the FSAR to assure that the information included in the report contains the latest information developed and failed to include the effects of changes made to the facility that did not require a license amendment. Specifically, the licensee did not include the effects of changes to the K300 voltage relay setpoint or the safety evaluation in submittals to the Final Safety Analysis Report, Section 8.3.1.1.11, that supported the conclusion that the changes did not require a license amendment. This performance deficiency was previously identified by the NRC and documented as NCV 05000445/2016007-01 and 05000446/2016007-01. In accordance with Section 2.3.2.a of the NRC Enforcement Policy, this finding is being cited because the licensee failed to restore, nor had plans to restore compliance within a reasonable amount of time after the violation was initially identified. This finding was entered into the licensee's corrective action program as Condition Report CR-2017-013071. (VIO 05000445/2017010-01; 05000446/2017010-01, "Failure to Update Final Safety Analysis Report, Section 8.3.1.1.11.")

b. Failure to Maintain Adequate Measures for Corrective Actions

Introduction. The NRC team identified a Green non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to accomplish activities affecting quality in accordance with approved procedures adequate to the circumstances. Specifically, the team identified 36 examples where the plant failed to follow their procedures for correcting conditions adverse to quality.

Description: In August of 2016 the licensee revised their corrective action program procedures to implement new industry initiatives to reduce unnecessary effort to correct conditions that did not meet regulatory requirements for correction. This modified program split the previous corrective action program into two parts: a corrective action program using "condition reports" that implemented the regulatory requirements of 10 CFR Part 50, Appendix B, their approved quality assurance program and other regulatory requirements for corrective action; and a separate program using "tracking reports" to document issues that did not require corrective action under NRC regulations. The licensee created an initial screening process in which conditions are documented as "issue reports" and then screened through a process to determine whether the condition will be entered into the corrective action program as a "condition report" or changed to a "tracking report." In October of 2017 the licensee further modified their corrective action program and associated procedures to implement additional guidance to further streamline the corrective action program. These procedure revisions changed the licensee's definition of "condition adverse to quality." The licensee implemented these procedure revisions through training of their staff. Following the revision of the corrective action procedures in October of 2017 the team discovered seven issue reports over a period of 3 days documenting conditions adverse to quality that had been screened out of the corrective action program. The team reviewed the conditions with the licensee, and the licensee discovered 29 additional examples over the previous 2-weeks that had been incorrectly screened out of the corrective action program. Ultimately, 36 examples of conditions adverse to quality were found to have been incorrectly screened out of the corrective action program over the 3-week period. Of the 36, 33 were conditions adverse to quality affecting safety or quality related SSCs. The remaining three of the conditions were failures to comply with quality assurance program requirements. The team determined that the licensee failed to follow Procedure STI-421.02, "Issue Report Reviews," which requires that the screeners determine the appropriate level of the documented condition in the issue report, including whether or not it will be entered into the corrective action program as a condition report. The licensee documented this issue in Condition Report CR-2017-012222.

The team reviewed all examples and any actions that the licensee had taken. The team determined that the licensee's corrective action program, as described in the FSAR and associated licensee procedures, allows closure of corrective actions to the work management process, provided appropriate administrative controls are in place to ensure completion of the required corrective actions. The licensee can also close tracking reports to the work management process, but does not require additional controls. In many of these examples, the licensee closed the tracking reports to the work management system, but did not assign the appropriate administrative controls to the work orders to ensure the conditions would be corrected. Specifically, Procedure STI-422.04, "Processing of Condition Reports," requires that work orders generated as corrective actions for condition reports are assigned a "priority type" code



designating the work order as a corrective action. Work orders assigned the code for corrective action cannot be voided without management approval. In these examples, the licensee did not follow Procedure STI-422.04 because the conditions were screened incorrectly. The team concluded that the required administrative controls to assure corrective action were not in place.

Of the 36 examples, 16 were closed to the work management process without the correct codes applied. Specific examples of these included potential blockage in control room intake radiation monitor piping, a failed transfer switch on a class 1E automatic bus transfer device, a diesel generator lube oil leak, and a failed ventilation system gravity damper. Because the team identified the incorrectly screened issue reports immediately, the licensee was able to implement the controls on all open work orders associated with the condition and ensure that corrective actions would be taken before more significant safety concerns occurred.

In other examples, the licensee closed the tracking reports to actions that were already completed. However, because the conditions were not correctly screened as conditions adverse to quality, the licensee failed to review five conditions for reportability prior to the team identifying the issue. Licensee Procedure STI-421.02 requires a review to be completed to determine whether a condition that could have resulted in a safety-related SSC being inoperable existed for greater than its allowed outage time. Specific examples of these included two safety-related valve transducers out of tolerance, a cross-threaded bolt in a safety-related circuit breaker, a safety-related current transducer out of tolerance, and a hole in a junction box exposing safety-related electrical equipment to potentially harsh conditions. The licensee performed the required reviews and concluded that all but one of the conditions were not reportable.

The team identified two examples where required actions were not taken as a result of the incorrect screening. Tracking report TR-2017-011768 documented a failure of a primary plant ventilation gravity damper. Although the gravity damper is safety-related, and therefore covered under 10 CFR Part 50, Appendix B, the condition was screened out of the corrective action program. As a result, the licensee failed to perform an operability evaluation as required by Procedure STI-422.01, "Operability Determination and Functionality Assessment Program." After performing an evaluation, the licensee concluded that the primary plant ventilation system was operable with the degraded condition. Tracking report TR-2017-011834 documented a hole in a junction box for a Unit 1 containment high range radiation detector. Although this radiation detector is safety-related, and therefore covered under 10 CFR Part 50, Appendix B, the condition was screened out of the corrective action program. As a result, the licensee failed to recognize that the condition, although corrected, involved a component that was inoperable for longer than its allowed technical specification outage time and required a report to be submitted in accordance with the licensee's Technical Specification 5.6.8, "PAM Report." After the licensee evaluated the condition as being reportable, the required report was submitted.

The team determined that the change in definition of "condition adverse to quality," in the licensee's procedures, was not adequately communicated to the individuals responsible for conducting the screening process, and resulted in those individuals applying an inappropriate threshold for screening conditions in their corrective action program.

Analysis: The licensee's failure to follow their Procedure STI-421.02, a quality related procedure, was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because if left uncorrected, it could lead to more significant safety concerns. Specifically, the failure to properly screen conditions adverse to quality into the licensee's corrective action program could result in further degradation in safety-related components or failure to take required corrective actions. The finding was associated with the Mitigating Systems cornerstone because the majority of conditions were associated with mitigating systems. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," dated October 7, 2016, and Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," the team determined the finding was of very low safety significance (Green) because although the conditions were deficiencies affecting the design or qualification of a mitigating SSC, the systems were all evaluated as being operable. The team determined the finding had a human performance cross-cutting aspect of H.3 change management, because the licensee failed to ensure that the change in the corrective action program was managed in a way to ensure nuclear safety was the overriding priority.

Enforcement: Title 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, that activities affecting quality shall be accomplished in accordance with documented instructions, procedures, or drawings. Contrary to the above, from October 10, 2017, through October 31, 2017, the licensee failed to ensure that activities affecting quality were accomplished in accordance with documented procedures. Specifically, the licensee failed to comply with Procedure STI-421.02, "Issue Report Reviews," and document conditions adverse to quality in their corrective action program. Since this violation was of very low safety significance (Green) and has been entered into the corrective action program as Condition Report CR-2017-012222, this violation is being treated as a NCV consistent with Section 2.3.2.a of the NRC Enforcement Policy. (NCV 05000445/2017010-02; 05000446/2017010-02, "Failure to Follow Procedures to Maintain Adequate Measures for Corrective Actions")

c. Failure to Take Timely and Adequate Corrective Actions for Replacing Optical Cables in the Diesel Generators Automatic Voltage Regulators (AVRs)

Introduction: The team identified a Green NCV of 10 CFR Part 50, Appendix B, Criterion XVI, for the failure to promptly identify and correct a condition adverse to quality. Specifically, the licensee failed to correct a condition adverse to quality effectively and in a timely manner related to the degrading and non-conforming condition of the fiber optic cables used in the Diesel Generator (DG) Automatic Voltage Regulator (AVR) Circuits, which affected the DGs reliability to perform one of its safety functions.

Description: On December 8, 2016, Condition Report CR-2016-010239 documents a condition adverse to quality regarding DG 1-01 AVR trouble alarm due to faulty communication through a fiber optic cable. The team learned that the licensee had determined the cause of the faulty communication, at that time, was due to the degrading and non-conforming condition from an age related mechanism in the fiber optic cables. All AVR fiber optic cables in place, at that time, had an age of at least 6 years. The licensee also sent the cable off for analysis by a third party laboratory. The report issued by the laboratory stated that the fiber optic cable, which the licensee had previously cut with a knife, had a non-smooth (mechanically deformed) end, which

introduced a mechanism whereby signal quality through the cable would be intermittent. The report recommended that a specialized tool, for cleaving the optical cable, be used to prevent mechanical deformation and surface contamination on its ends.

On November 27, 2017, the team inquired about a condition that caused the DG 2-01 AVR trouble annunciator to alarm on November 17, 2017. The licensee documented the issue in Condition Report CR-2017-012820 and concluded that the event was similar and related to the event in 2016. The licensee implemented troubleshooting to determine if any other actions were necessary to address the recent condition documented in Condition Report CR-2017-012820.

On November 29, 2017, the team met with licensee engineering staff to discuss the decisions made to address various intermittent alarming issues regarding the AVR communication circuit. The licensee indicated that they had developed corrective actions to revise the preventive maintenance frequency to replace fiber optic cables every 4.5 years. In addition, they procured a specialized cutting tool to re-cut the ends of the optical cables. However, the licensee closed Condition Report CR-2016-010239 without re-cutting the fiber optic cables with the specialized cutting tool, as had been recommended in the lab report, nor had the licensee replaced any of the cables as specified in their preventive maintenance procedure.

In addition, on November 30, 2017, the team observed a licensee demonstration on a training mockup of the voltage regulator and discussed the licensee's troubleshooting methods. Upon having further discussions with the engineering and licensing staff, the team learned that the current state of the voltage regulator fiber optic circuit continued to be degraded and non-conforming. This was because the licensee had not taken actions to correctly cut the cables, nor replace them per the preventive maintenance process. The licensee told the team that a few work orders were in place to begin performing the correct cutting of the cables, but that the replacements were not scheduled.

The team concluded that the licensee has yet to correct the deficiencies with the fiber optic cable, allowing this degraded and non-conforming condition to exist, which affects the reliability of the voltage regulator to perform its function. The team determined that the intermittent trouble alarm, received for the voltage regulator, challenges the diesel's operability when the automatic function of the voltage regulator is lost. As a result, the licensee would be forced to perform this function manually. When the DG AVR loses this function, the licensee declares the diesel inoperable and enters Technical Specification 3.8.1. Each time the licensee experiences faulty communication regarding the fiber optic circuit, the diesel is incapable of automatically synchronizing to the incoming offsite power, when offsite power is being restored. The team also recognized that this failure could be experienced when the DG is nearing completion of its mission time.

The licensee informed the team that they had performed an extent of condition review and determined that the AVR communication circuit is the only safety-related system that contains fiber optic cables. Therefore, this degraded and non-conforming condition does not exist anywhere else in the plant.

Analysis: The licensee's failure to replace and/or appropriately cut the ends of the fiber optic cables in the AVR communication circuit, to correct a condition adverse to quality, was a performance deficiency. The performance deficiency was more than minor, and

therefore a finding, because it was associated with the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to correct a degraded and non-conforming condition caused by fiber optic cutting methods and optical cable age-degradation for the AVRs, affected the reliability of the site's DGs to perform one of their safety functions. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," dated October 7, 2016, and Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," the team determined the finding screens as Green because the finding is a deficiency affecting the design or qualification of a mitigating SSC, but does maintain its operability and functionality. The team determined the finding had a human performance cross-cutting aspect of H.5 work management, because the licensee failed to ensure that defined corrective actions were implemented in a timely manner.

Enforcement: Title 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requires, in part, that measures shall be established to assure that conditions adverse to quality are promptly identified and corrected. Contrary to the above, from December of 2016 through December of 2017 for quality related components associated with the DGs, the licensee failed to assure that conditions adverse to quality were promptly identified and corrected. Specifically, the licensee failed to replace fiber optic cables for all four DGs and ensure that the ends were cut with a fiber optic cable cutting tool. Neither of the corrective actions have been performed. Since this violation was of very low safety significance (Green) and has been entered into the corrective action program as Condition Report CR-2017-013488, this violation is being treated as a NCV consistent with Section 2.3.2.a of the NRC Enforcement Policy. (NCV 05000446/2017010-03, "Failure to Promptly Correct a Condition Adverse to Quality")

#### **40A6 Meetings, Including Exit**

##### Exit Meeting Summary

On December 14, 2017, the team presented the inspection results to Mr. K. Peters, Senior Vice President and Chief Nuclear Officer, and other members of the licensee staff. The licensee acknowledged the issues presented. The licensee confirmed that any proprietary information reviewed by the team had been returned or destroyed.

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### **Licensee Personnel**

K. Peters, Senior Vice President and Chief Nuclear Officer  
D. Christiansen, Nuclear Training Director  
J. Dreyfuss, Plant Manager  
T. Gibbs, Employee Concerns Program Manager  
T. Gilder, Technical Support Manager  
D. Goodwin, Director Work Management  
J. Gumnick, Radiation Protection Manager  
J. Hicks, Regulatory Affairs  
K. Kettering, Maintenance Plant Support Manager  
J. Lloyd, Shift Operations Manager  
T. McCool, Site Vice President  
D. Mcgaughey, Outage Manager  
G. Merka, Regulatory Affairs  
M. Reeves, Maintenance Director  
S. Sewell, Senior Director Engineer and Regulatory Affairs  
C. Singleton, Engineering  
L. Slaughter, Corrective Action Program Engineer  
M. Stakes, Director Organizational Effectiveness  
B. Thompson, Plant Reliability Manager  
D. Volkening, Nuclear Operating Systems Audit Manager  
L. Windham, Corrective Action Program Manager  
H. Winn, System Engineering Manager

### **LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED**

#### **Opened**

05000445-2017010-01	VIO	Failure to Update Final Safety Analysis Report, Section 8.3.1.1.11 (Section 4OA2.5.a)
05000446-2017010-01		

#### **Opened and Closed**

05000445-2017010-02	NCV	Failure to Maintain Adequate Measures for Corrective Actions (Section 4OA2.5.b)
05000446-2017010-02		
05000445-2017010-03	NCV	Failure to Promptly Correct a Condition Adverse to Quality (Section 4OA2.5.c)
05000446-2017010-03		

## LIST OF DOCUMENTS REVIEWED

### Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
MSE-CO-0868	Diesel Generators Thyripart Excitation System	1
OPT-214B	Diesel Generator Operability Test	16
PPT-SX-7516 B	Auxiliary Safeguards and Fuel Building Negative Pressure Test	5
RPI-602	Radiological Surveillance and Posting	58
RPI-606	Radiation Work and General Permits	37
RPI-620	Crud Burst Trending	17
SOP-102 A/B	Residual Heat Removal System	20
STA-114	Employee Concerns and Employee Protection	4
STA-116	Maintenance of CPNPP Licensing Basis Documents, Operating License Conditions, and Technical Specifications	14
STA-206	Review of Vendor Documents and Technical Manuals	24
STA-213	Correspondence with Regulatory Agencies	
STA-421	Control of IRs	21
STA-422	Corrective Action Program	34
STA-426	Industry Operating Experience Program	7
STA-696	Hazard Barrier Controls	2
STI-421.01	Initiation of IRs	0
STI-421.02	Issue Report Reviews	0
STI-422.01	Operability Determination and Functionality Assessment Program	4
STI-422.02	Compensatory Actions and Transient Equipment Placements	1

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
STI-422.03	Performing Coaching and Cause Analysis	0
STI-422.04	Processing of Condition Reports	0
TSP-503	Diesel Generators Reliability Program	4

Condition Reports (CRs)

CR-2008-000193	CR-2008-001971	CR-2009-003927	CR-2011-006113	CR-2013-012281
CR-2014-002004	CR-2014-005114	CR-2014-008651	CR-2014-013752	CR-2015-000162
CR-2015-000442	CR-2015-004179	CR-2015-004598	CR-2015-005204	CR-2015-005583
CR-2015-005683	CR-2015-006201	CR-2015-006398	CR-2015-006821	CR-2015-007369
CR-2015-007554	CR-2015-007644	CR-2015-007819	CR-2015-007856	CR-2015-007857
CR-2015-007869	CR-2015-007882	CR-2015-007919	CR-2015-007941	CR-2015-008148
CR-2015-008183	CR-2015-008318	CR-2015-008353	CR-2015-008520	CR-2015-008589
CR-2015-008624	CR-2015-008822	CR-2015-008824	CR-2015-008845	CR-2015-008877
CR-2015-008899	CR-2015-009077	CR-2015-009095	CR-2015-009109	CR-2015-009586
CR-2015-009702	CR-2015-009736	CR-2015-009975	CR-2015-009992	CR-2015-010120
CR-2015-010211	CR-2015-010258	CR-2015-010549	CR-2015-010581	CR-2015-010727
CR-2015-010800	CR-2015-010961	CR-2016-000088	CR-2016-000091	CR-2016-000277
CR-2016-000442	CR-2016-000629	CR-2016-000719	CR-2016-001223	CR-2016-001320
CR-2016-001332	CR-2016-001416	CR-2016-001539	CR-2016-001651	CR-2016-001654
CR-2016-001928	CR-2016-002622	CR-2016-002695	CR-2016-003219	CR-2016-003699
CR-2016-003811	CR-2016-003699	CR-2016-003920	CR-2016-004050	CR-2016-004135
CR-2016-004199	CR-2016-004390	CR-2016-004423	CR-2016-004694	CR-2016-004879
CR-2016-004916	CR-2016-005048	CR-2016-005164	CR-2016-005798	CR-2016-005878
CR-2016-006154	CR-2016-006537	CR-2016-006811	CR-2016-007303	CR-2016-007423
CR-2016-007424	CR-2016-007617	CR-2016-007722	CR-2016-008147	CR-2016-008177
CR-2016-008215	CR-2016-008312	CR-2016-008491	CR-2016-008680	CR-2016-008744
CR-2016-008823	CR-2016-010025	CR-2016-010239	CR-2016-010378	CR-2016-010702
CR-2016-010743	CR-2016-010832	CR-2017-000690	CR-2017-000694	CR-2017-000744
CR-2017-001296	CR-2017-001465	CR-2017-002347	CR-2017-002349	CR-2017-002591
CR-2017-003920	CR-2017-004307	CR-2017-004322	CR-2017-004342	CR-2017-004696

Condition Reports (CRs)

CR-2017-004950 CR-2017-004991 CR-2017-005006 CR-2017-005171 CR-2017-005248  
CR-2017-005352 CR-2017-005418 CR-2017-005564 CR-2017-005654 CR-2017-006219  
CR-2017-006236 CR-2017-006463 CR-2017-006465 CR-2017-006546 CR-2017-006550  
CR-2017-006555 CR-2017-006656 CR-2017-006658 CR-2017-006676 CR-2017-006780  
CR-2017-007659 CR-2017-007745 CR-2017-007746 CR-2017-008000 CR-2017-008462  
CR-2017-008511 CR-2017-008554 CR-2017-008728 CR-2017-008847 CR-2017-009077  
CR-2017-009247 CR-2017-009393 CR-2017-009494 CR-2017-009632 CR-2017-009633  
CR-2017-009789 CR-2017-011922 CR-2017-012222 CR-2017-012041 CR-2017-012820  
CR-2017-012825 CR-2017-012865 CR-2017-013019 CR-2017-013045 CR-2017-013071  
CR-2017-013466

Tracking Reports (TRs)

TR-2015-000226 TR-2016-000757 TR-2016-002744 TR-2016-007033 TR-2016-007091  
TR-2016-007869 TR-2016-010767 TR-2016-010771 TR-2017-002977 TR-2017-003789  
TR-2017-013074

Final Design Authorization (FDA)

<u>Number</u>	<u>Title</u>
2017-000083-01-00	Per AI-CR-2017-001465-1 revise DBD-ME-0229 to correct the CCW System response following a Design Basis Tornado event

Design Basis Document (DBD)

<u>Number</u>	<u>Title</u>	<u>Revision</u>
DBD-ME-229	Component Cooling Water System	41

Miscellaneous Documents

<u>Number</u>	<u>Title</u>	<u>Revision Date</u>
	Simovert Masterdrives (6SE7087-6XC84-0BC0)	
	Maintenance Rule Review Panel Meeting Minutes	November 17, 2016
	Maintenance Rule Review Panel Meeting Minutes	December 15, 2016



### Miscellaneous Documents

<u>Number</u>	<u>Title</u>	<u>Revision Date</u>
	Westinghouse Letter "Comanche Peak Unit 2 – Quantitative Evaluation for Continued Operation with Inactive Steam Generator Snubbers"	September 29, 2017
FDA-2012-000121-01-00	Final Design Authorization to Increase Allowable Setpoints for the Diesel Generator AVR Voltage Monitor	October 8, 2012
CPSES-200501587	Comanche Peak Steam Electric Station Docket Numbers 50-445 and 50-446 10 CFR 50.59 Evaluation Summary Report 0012 and Commitment Material Change Evaluation Report 0006	August 2, 2005
59SC-2012-000121-01	10 CFR 50.59 Screen for Change of Setpoints for DG AVR Voltage Monitoring Relay	1
59EV-2001-001255-02-01	10 CFR 50.59 Evaluation for Change of Setpoints for DG AVR Voltage Monitoring Relay	1
5021794-06	Defense-in-Depth and Diversity	1
2323-ES-13B.1	Low-Voltage Control and Switchyard Cable Specification	1
2323-ES-13B.2	Low-Voltage Power and Lighting Cable Specification	1
TR 1020804	Plant Support Engineering: Aging Management Program Development Guidance for AC and DC Low-Voltage Power Cable Systems for Nuclear Power Plants	June 2010

### Calculations

<u>Number</u>	<u>Title</u>	<u>Revision</u>
0210-063-0043	Maximum Permissible Fire Loading/Non-Rated Features Analysis	14
ME-CA-0304-5107	Control Room Heat Gain and Room Temperature Summary	7
X-EB-304-4	Cooling Capacity of Control Room Air Conditioners	4
32-9222189-000	CPNPP DG ETAP Dynamic Calculation	0

Drawings

<u>Number</u>	<u>Title</u>	<u>Revision</u>	<u>Date</u>
TAE46-A1202-S357-M	Thyripart Excitation Overview Regulation Unit Circuit Diagram		February 27, 2003
2323-EL-0604	Safeguard Bldg. Misc. Partial Plans	26	

Work Orders (WO)

4913370	4913376	4913377	4913379	4999528
4999539	5184510	5355516	5366758	5367512
5367516				

Operating Experience Reports (OER)

OER-2017-000892	OER-2017-002199	OER-2016-007003	OER-2016-007684
OER-2016-007971	OER-2016-008577	OER-2016-008621	OER-2016-009038

**Info Request**  
**Biennial Problem Identification and Resolution**  
**Inspection Comanche Peak Nuclear Power Plant**  
**Units 1 and 2**  
**August 2, 2017**

**Inspection Report: 05000445/2017010; 05000446/2017010**  
**On-site Inspection Dates: November 27-December 1 and December 11-15, 2017**

This inspection will cover the period from September 18, 2015, through December 15, 2017. All requested information is limited to this period or to the date of this request unless otherwise specified. To the extent possible, the requested information should be provided electronically in word-searchable Adobe PDF (preferred) or Microsoft Office format. Any sensitive information should be provided in hard copy during the team's first week on site; do not provide any sensitive or proprietary information electronically.

Lists of documents ("summary lists") should be provided in Microsoft Excel or a similar sortable format. Please be prepared to provide any significant updates to this information during the team's first week of on-site inspection. As used in this request, "corrective action documents" refers to condition reports, notifications, action requests, cause evaluations, and/or other similar documents, as applicable to the Comanche Peak Nuclear Power Plant.

Please provide the following information no later than October 16, 2017:

i. Document Lists

Note: For these summary lists, please include the document/reference number, the document title, initiation date, current status, and long-text description of the issue.

- a. Summary list of all corrective action documents related to significant conditions adverse to quality that were opened, closed, or evaluated during the period
- b. Summary list of all corrective action documents related to conditions adverse to quality that were opened or closed during the period
- c. Summary lists of all corrective action documents that were upgraded or downgraded in priority/significance during the period (these may be limited to those downgraded from, or upgraded to, apparent-cause level or higher)
- d. Summary list of all corrective action documents initiated during the period that "roll up" multiple similar or related issues, or that identify a trend
- e. Summary lists of operator workarounds, operator burdens, temporary modifications, and control room deficiencies (1) currently open and (2) that were evaluated and/or closed during the period
- f. Summary list of safety system deficiencies that required prompt operability determinations (or other engineering evaluations) to provide reasonable assurance of operability

- g. Summary list of plant safety issues raised or addressed by the Employee Concerns Program (or equivalent) (sensitive information should be made available during the team's first week on site—do not provide electronically)
- h. Summary list of all Apparent Cause Evaluations completed during the period

2. Full Documents with Attachments

- a. Root Cause Evaluations completed during the period; include a list of any planned or in progress
- b. Quality Assurance audits performed during the period
- c. Audits/surveillances performed during the period on the Corrective Action Program, of individual corrective actions, or of cause evaluations
- d. Functional area self-assessments and non-NRC third-party assessments (e.g., peer assessments performed as part of routine or focused station self- and independent assessment activities; do not include INPO assessments) that were performed or completed during the period; include a list of those that are currently in progress
- e. Any assessments of the safety-conscious work environment at the Comanche Peak Nuclear Power Plant
- f. Corrective action documents generated during the period associated with the following:
  - i. NRC findings and/or violations issued to the Comanche Peak Nuclear Power Plant
  - ii. Licensee Event Reports issued by the Comanche Peak Nuclear Power Plant
- g. Corrective action documents generated for the following, if they were determined to be applicable to the Comanche Peak Nuclear Power Plant (for those that were evaluated but determined not to be applicable, provide a summary list):
  - i. NRC Information Notices, Bulletins, and Generic Letters issued or evaluated during the period
  - ii. 10 CFR Part 21 reports issued or evaluated during the period
  - iii. Vendor safety information letters (or equivalent) issued or evaluated during the period
  - iv. Other external events and/or Operating Experience evaluated for applicability during the period

- h. Corrective action documents generated for the following:
  - i. Emergency planning drills and tabletop exercises performed during the period
  - ii. Maintenance preventable functional failures which occurred or were evaluated during the period
  - iii. Adverse trends in equipment, processes, procedures, or programs that were evaluated during the period
  - iv. Action items generated or addressed by offsite review committees during the period

3. Logs and Reports

- a. Corrective action performance trending/tracking information generated during the period and broken down by functional organization (if this information is fully included in item 3.c, it need not be provided separately)
- b. Corrective action effectiveness review reports generated during the period
- c. Current system health reports, Management Review Meeting package, or similar information; provide past reports as necessary to include  $\geq 12$  months of metric/trending data
- d. Radiation protection event logs during the period
- e. Security event logs and security incidents during the period (sensitive information should be made available during the team's first week on site—do not provide electronically)
- f. Employee Concern Program (or equivalent) logs (sensitive information should be made available during the team's first week on site—do not provide electronically)
- g. List of training deficiencies, requests for training improvements, and simulator deficiencies for the period

Note: For items 3.d–3.g, if there is no log or report maintained separate from the corrective action program, please provide a summary list of corrective action program items for the category described.

4. Procedures

Note: For these procedures, please include all revisions that were in effect at any time during the period.

- a. Corrective action program procedures, to include initiation and evaluation procedures, operability determination procedures, apparent and root cause evaluation/determination procedures, and any other procedures that

implement the corrective action program at the Comanche Peak Nuclear Power Plant

- b. Quality Assurance program procedures (specific audit procedures are not necessary)
- c. Employee Concerns Program (or equivalent) procedures
- d. Procedures which implement/maintain a Safety-Conscious Work Environment

5. Other

- a. List of risk-significant components and systems, ranked by risk worth
- b. Organization charts for plant staff and long-term/permanent contractors
- c. Electronic copies of the UFSAR (or equivalent), technical specifications, and technical specification bases, if available
- d. Table showing the number of corrective action documents (or equivalent) initiated during each month of the inspection period, by screened significance
- e. For each day the team is on site,
  - i. Planned work/maintenance schedule for the station
  - ii. Schedule of management or corrective action review meetings (e.g., operations focus meetings, condition report screening meetings, CARBs, MRMs, challenge meetings for cause evaluations, etc.)
  - iii. Agendas for these meetings

Note: The items listed in 5.d may be provided on a weekly or daily basis after the team arrives on site.

All requested documents should be provided electronically where possible. Regardless of whether they are uploaded to an internet-based file library (e.g., Certrec's IMS), please provide copies on CD or DVD. One copy of the CD or DVD should be provided to the resident inspector office at the Comanche Peak Nuclear Power Plant; three additional copies should be provided to the team lead, to arrive no later than October 16, 2017:

Ray Azua  
U.S. NRC Senior Reactor Inspector  
Inspection Program and Assessment Team  
Division of Reactor Safety, Region IV  
1600 E. Lamar Blvd, Arlington, TX 76011  
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COMANCHE PEAK NUCLEAR POWER PLANT, UNITS 1 AND 2 – NRC PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000445/2017010 AND 05000446/2017010 - AND NOTICE OF VIOLATION – FEBRUARY 22, 2018

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