UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
612 EAST LAMAR BLVD, SUITE 400
ARLINGTON, TEXAS 76011-4125

September 12, 2011

Mr. Rafael Flores, Senior Vice President
and Chief Nuclear Officer
Luminant Generation Company, LLC
Comanche Peak Nuclear Power Plant
P.O. Box 1002
Glen Rose, TX 76043

SUBJECT: COMANCHE PEAK NUCLEAR POWER PLANT – NRC PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000445/2011006 AND 05000446/2011006

Dear Mr. Flores:

On July 28, 2011, the U. S. Nuclear Regulatory Commission (NRC) completed a team inspection at Comanche Peak Nuclear Power Plant. The enclosed report documents the inspection findings, which were discussed on July 28, 2011, with Mr. Mitch Lucas, Site Vice President, and other members of your staff.

The inspection examined activities conducted under your license as they relate to identification and resolution of problems, safety and compliance with the Commission's rules and regulations and with the conditions of your operating license. The team reviewed selected procedures and records, observed activities, and interviewed personnel. The team also interviewed a representative sample of personnel regarding the condition of your safety conscious work environment. The team concluded that in general, problems were properly identified, evaluated, and corrected.

This report documents four NRC-identified findings of very low safety significance (Green). All of these findings were determined to involve violations of NRC requirements. However, because of the very low safety significance of the violations and because they were entered into your corrective action program, the NRC is treating these violations as noncited violations consistent with Section 2.3.2 of the NRC Enforcement Policy. If you contest these noncited violations, or the significance of the noncited violations, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 612 E. Lamar Blvd., Suite 400, Arlington, Texas, 76011-4125; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington DC 20555-0001; and the NRC Resident Inspector at the Comanche Peak Nuclear Power Plant. In addition, if you disagree with the crosscutting aspect assigned to any finding 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 Regional Administrator, Region IV, and the NRC Resident Inspector at the Comanche Peak Nuclear Power Plant.

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

Sincerely,

/RA/

Dr. Dale A. Powers, Acting Chief
Technical Support Branch
Division of Reactor Safety

Dockets: 50-445; 50-446
Licenses: NPF-87; NPF-89

Enclosure:
Inspection Report 05000445/2011006 and 05000446/2011006
w/Attachments: Attachment 1, Supplemental Information
Attachment 2, Initial Information Request

cc w/ Enclosure:
Distribution via Listserv for Comanche Peak

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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket:	05000445, 05000446
License:	NPF-87, NPF-89
Report:	05000445/2011006 and 05000446/2011006
Licensee:	Luminant Generation Company, LLC
Facility:	Comanche Peak Nuclear Power Plant
Location:	FM-56, Glen Rose, Texas
Dates:	July 11 through July 28, 2011
Team Leader:	J. Reynoso, Resident Inspector
Inspectors:	J. Kramer, Senior Resident Inspector W. Sifre, Senior Reactor Inspector J. Braisted, Reactor Inspector
Approved By:	Dr. Dale A. Powers, Acting Chief Technical Support Branch Division of Reactor Safety

SUMMARY OF FINDINGS

IR 05000445/2011006, 05000446/2011006; 07/11/2011-7/28/2011; Comanche Peak Nuclear Power Plant "Biennial Baseline Inspection of the Identification and Resolution of Problems."

The inspection was performed by reactor inspectors and resident inspectors. Four noncited violations of very low safety significance (Green) were identified during this inspection. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process." Findings for which the significance determination process does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG 1649, "Reactor Oversight Process," Revision 4, dated December 2006.

Identification and Resolution of Problems

The team reviewed approximately 450 condition reports, work orders, engineering evaluations, root and apparent cause evaluations, and other supporting documentation to determine if problems were being properly identified, characterized, and entered into the corrective action program for evaluation and resolution. The team reviewed a sample of system health reports, self-assessments, trending reports and metrics, and various other documents related to the corrective action program. Based on these reviews, inspection team concluded that the implementation of the corrective action program at Comanche Peak Nuclear Power Plant Units 1 and 2 is acceptable. The team noted that the licensee personnel were identifying issues at a sufficiently low threshold, evaluating, prioritizing problems, and generally analyzed operating experience appropriately. The team determined that licensee personnel were performing effective self-assessments, and have maintained an effective safety conscious work environment.

The team identified challenges in the area of effective corrective actions and evaluation of problems. The team noted that the licensee has long-standing equipment problems, which may indicate lack of effective corrective actions. The team determined that ineffective corrective actions for diesel generator cam cover bolts, jacket water leaks, service water vacuum breakers and globe valves (HermaValves®) continued.

The team also determined the licensee staff appropriately evaluated industry operating experience for relevance to the facility and had entered applicable items in the corrective action program. The licensee generally used industry operating experience when performing root cause and apparent cause evaluations. However, the team noted that sometimes these actions were not thorough. As an example, the team determined there was adequate information from industry operating experience, to prevent the failure of motor operated valves due to use of dry stem lubricant. The licensee staff implemented most of the needed actions, but due to scheduling and inaccessibly, failed to appropriately correct the condition which resulted in a motor operated valve not performing its safety function.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- SL-IV. The team identified a Severity Level IV noncited violation of 10 CFR 50.59, "Changes, Tests, and Experiments," associated with the failure to conclude that a change to the Final Safety Analysis Report required prior NRC review and approval prior to implementation. Specifically, the licensee made changes to the Final Safety Analysis Report that resulted in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component important to safety. The licensee entered the finding in the corrective action program as Condition Report CR 2011-008509.

  This finding was more than minor because there was a reasonable likelihood that the change would require a prior NRC approval. Violations of 10 CFR 50.59 are violations that potentially impede or impact the regulatory process and are processed through traditional enforcement. As required by Section 7.3 of the Enforcement Policy, the team performed a Phase 1 screening in accordance with Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," to determine the significance of the finding. The team determined that the finding is of very low safety significance (Green) because the finding: (1) was not a design or qualification issue confirmed not to result in a loss of operability or functionality; (2) did not represent an actual loss of safety function of the system or train; (3) did not result in the loss of one or more trains of nontechnical specification equipment; and (4) did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. Since violations of 10 CFR 50.59 may result in conditions evaluated as having very low safety significance by the Significance Determination Process, the team categorized the finding as Severity Level IV in accordance with the Enforcement Manual. The finding was a violation determined to be of very low safety significance, was not repetitive or willful, and was entered into the corrective action program. Therefore, this violation is being treated as a noncited violation consistent with the NRC Enforcement Policy. The team did not identify a crosscutting aspect with this finding since this performance issue occurred in 2004 and is not reflective of current performance (Section 4OA2.5a).

- Green. The team identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to have documented instructions for an activity affecting quality. Specifically, the licensee did not have documented instructions for filling the diesel generator jacket water system when the normal fill method would not be available during a loss-of-offsite power. Prior to July 27, 2011, the licensee failed to have adequate instructions for filling the diesel generator jacket water system, an activity affecting quality, during a loss-of-offsite power. The licensee entered the finding into the corrective action program as Condition Report CR 2011-008510.

This performance deficiency was determined more than minor because it was associated with the procedure quality attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using NRC Manual Chapter 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance because the finding did not result in an actual loss of safety related equipment for greater than the technical specification allowed outage time and did not represent a loss of equipment designated as risk-significant in the maintenance rule. The finding did not have a crosscutting aspect because it was not representative of current licensee performance. (Section 4OA2.5b).

- Green. The team identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure of the licensee to follow the operability determination Procedure ODA-309, "Operability Determination and Functionality Assessment Program." Specifically, the licensee did not appropriately evaluate a long-standing degraded condition such that the diesel generators would remain operable for their mission time as required by Procedure ODA-309. As a result, adequate compensatory measures were not established to ensure operability. The licensee entered the finding into the corrective action program as Condition Report CR 2011-008508.

  The performance deficiency was determined to be more than minor because it was associated with the equipment performance attribute of the Mitigating System Cornerstone and affects the cornerstone objective to ensure the availability and reliability of safety related diesel generators that respond to initiating events to prevent undesirable consequences in that the safety related diesel generators supply power to safety related loads. Because Manual Chapter 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," was not well suited for this finding, a Phase 3 Risk Significance Estimation was required. A Region IV senior reactor analyst performed a bounding Phase 3 significance determination and determined that the finding was of very low safety significance. The bounding change to core damage frequency was 6.7E-7/year. The simplified plant analysis risk (SPAR) model does not include the contribution of the recently installed alternate power generators, which would lower the risk significance of a safety related diesel generator failure for the station blackout sequences, which comprise most of the risk of this finding. The team determined that there was a crosscutting aspect in the area of human performance decision-making because the licensee failed to use conservative assumptions in decision making in the assessment of operability [H.1(b)] (Section 4OA2.5c).

- Green. The team identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," in that the licensee did not correct a condition adverse to quality regarding the safety related diesel generators.

Specifically, as of July 12, 2011, the licensee failed to assure that the identified broken cam cover bolts on the diesel generators were adequately corrected. The licensee entered the finding into the corrective action program as Condition Report CR 2011-008505.

The performance deficiency was determined to be more than minor because it was associated with the equipment performance attribute of the Mitigating System Cornerstone and affects the cornerstone objective to ensure the availability and reliability of safety related diesel generators that respond to initiating events to prevent undesirable consequences in that the safety related diesel generators supply power to vital and safety related loads. Because Manual Chapter 0609, Attachment 4, "Phase 1 Initial Screening and Characterization of Findings," was not well suited for this finding a Phase 3 Risk Significance Estimation was required. A Region IV senior reactor analyst performed a bounding Phase 3 significance determination and found that the finding was of very low safety significance. The bounding change to core damage frequency was 6.7E-7/year. The SPAR model does not include the contribution of the recently installed alternate power generators, which would considerably lower the risk significance of safety related diesel generator failure for the station blackout sequences, which comprise most of the risk of this finding. The team determined that there was a crosscutting aspect in the area of problem identification and resolution because the licensee failed to thoroughly evaluate problems such that the resolutions address causes and extent of conditions, as necessary [P.1(c)] (Section 4OA2.5d).

B. Licensee-Identified Violations

None

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution (71152)

The team based the following conclusions on the sample of corrective action documents that were initiated in the assessment period, which ranged from August 15, 2009, to the end of the on-site portion of this inspection on July 28, 2011.

.1 Assessment of the Corrective Action Program Effectiveness

a. Inspection Scope

The team reviewed documents, interviewed personnel, attended meetings, and walked down plant equipment. The documents reviewed included over 450 corrective actions, self-assessments, evaluations and station procedures including associated root cause, apparent cause, and direct cause evaluations to determine if problems were being properly identified, characterized, and entered into the corrective action program for evaluation and resolution.

The team verified that the licensee entered problems into the corrective action program for resolution. The team reviewed the details of the information related to the condition reports to ensure that the evaluations were thorough and complete. The team reviewed the licensee's determinations on the extent of cause and condition for the problems, as well as how the licensee assessed previous occurrences. The team assessed how the licensee prioritized problems so that corrective actions were appropriate and timely. In addition, the team verified the effectiveness of corrective actions, completed or planned, and looked for additional examples of similar problems.

In order to accomplish the above, the team reviewed approximately 300 condition reports out of approximately 26,000 that had been issued during the assessment period. The team also reviewed a sample of system health reports, self-assessments, trending reports and metrics, selected logs, audits, operability evaluations, and results from surveillance tests and preventive maintenance tasks. The team reviewed a sample of corrective actions closed to other corrective action documents.

The team reviewed a sample of system health reports, operability determinations, self-assessments, trending reports and metrics, and various other documents related to the corrective action program. The team evaluated the licensee's efforts in establishing the scope of problems by reviewing selected logs, work requests, self-assessment results, audits, system health reports, action plans, and results from surveillance tests and preventive maintenance tasks. The team reviewed work requests and attended the licensee's daily plan of the day meeting, a corrective action review board, a station ownership committee, and a management review meeting to assess the reporting threshold, prioritization efforts, and significance determination process, as well as

observing the interfaces with the operability assessment and work control processes, when applicable.

The team conducted interviews with plant personnel to identify other processes that may 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 ensure that the corrective action addressed the issues as described in the inspection reports. The team reviewed a sample of corrective actions closed to other corrective action documents to ensure that corrective actions were appropriate and timely.

The team considered risk insights from both the NRC's and the licensee's risk assessments to focus the sample selection and plant tours on risk significant systems and components. The team selected the following risk significant systems:

- Safety related diesel generators
- Safety related service water system
- Auxiliary feedwater
- 480 volt electrical system
- Refueling water storage and condensate storage tanks
- Chemical and volume control system

The samples reviewed by the team focused on, but were not limited to, these systems. The team also expanded their review to include five years of evaluations involving the safety related diesel generators and service water systems to determine whether problems were being effectively addressed. The team conducted a walkdown of these systems to assess whether problems were identified and entered into the corrective action program.

b. Assessments

1. Effectiveness of Problem Identification

The team concluded that the licensee identified conditions adverse to quality and entered them into the corrective action program in accordance with the licensee's corrective action program guidance and NRC requirements. The team determined that the licensee identified problems at a low threshold and entered them into the corrective action program. However, the team identified problems during the team walkdown that should have been previously recognized.

- Auxiliary feedwater cross connect valves were identified by team as leaking grease. Condition Report CR 2011-007845 documents this issue.

- Auxiliary feedwater inboard bearing oil level was identified as high out of the normal band, requiring that excessive oil be drained. Condition Report CR 2011-007851 documents this issue.

- A technically inadequate scaffolding procedure for seismic limitations of scaffolding near safety related equipment. Condition Report CR 2011-007907 documents this issue.

The team did not identify any conditions adverse to quality that were not placed in the corrective action program.

2. Effectiveness of Prioritization and Evaluation of Issues

The team concluded that, generally, the licensee effectively evaluated problems. However, the team determined that there were several indications of weak evaluations of long term problems.

- The team identified several instances where operability determinations on safety related equipment did not properly consider the mission time which resulted in acceptance of long term degraded conditions.

- The team also identified that there was a mindset that long term degraded conditions were acceptable because there was no immediate impact to operability.

- The team identified a work backlog in certain programs that were not being properly addressed by key performance indicators.

3. Effectiveness of Corrective Action Program

The team concluded that actions to correct problems were generally effective. However, the team identified three examples of conditions where corrective actions have not been effective:

- Failures of diesel generator cam cover bolts, which were identified in 1995 but replaced as they occurred.

- Reliability issues with the safety related service water vacuum breaker, such that the vacuum breaker does not open when required. This has been an ongoing issue since 2002.

- Numerous repeated failures of globe type (HermaValves®) drain and vent valves occurring since 2004. These were caused by yoke bushing failures and over-torquing. The most recent failure resulted in an unusual event.

.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 procedure and self-assessments. The team reviewed a sample of industry operating experience evaluations to assess whether the licensee had appropriately evaluated the notifications for relevance to the facility. The team also reviewed assigned actions to ensure they were appropriate. The team reviewed a sample of root and apparent cause evaluations to ensure that the licensee had appropriately included industry operating experience.

b. Assessment

Overall, the team concluded that the licensee generally evaluated industry operating experience for relevance to the facility, and appropriately entered applicable operating experience into the corrective action program. The team concluded that operating experience was appropriately included in causal evaluations. However, in two cases the team determined that actions were not thorough enough regarding improper lubrication of valve stem shafts on safety related motor operated valves.

- In April 8, 2011, during motor operated valve (MOV) testing in refueling outage 2RF12, Condition Report CR 2011-004136 documents Valve 2-8000A failure of minimum thrust requirements in closed direction because of lack of lubricant.

- The team determined inadequate lubrication of motor operated valve stems, which could be indicative of an inadequate procedure since full stroke and inspection of stems were not possible. The licensee's engineering staff implemented limited actions documented in Condition Report CR 2007-002872, "USA-STARS self-assessments," which recommended "full stroke for good lubrication," but actions did not follow through to include the valves that could not be fully inspected.

.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 the attachment.

The team also reviewed several licensee observations recorded by management to ensure that issues were properly documented at the appropriate level. The team also reviewed adverse trends documented in several areas including contamination events occurring between the last two refueling outages.

b. Assessment

The team concluded that the licensee had an effective self-assessment and audit process. Licensee management was involved with developing tactical self-assessments. The team determined self-assessments were self-critical and thorough enough to identify deficiencies. The team noted that the licensee had improved their operating experience program to ensure adequate overview by management and to provide resources by assigning tactical and strategic related self-assessments. Strategic self-assessments included personnel from outside organizations, and tactical self-assessments received division management overview. The team noted the licensee was reviewing actions to improve overdue self-assessments by improving management oversight and effectiveness of the self-assessment review board. However, the team also noted that the licensee divided industry operating events into three separate organizations with an emphasis on processing third party significant operating events. The team determined that the licensee limited self-assessments to these significant operating events programs and did not include some of the engineering related vendor document tracking programs. The team noted these programs had large backlogs and were not included in key performance improvement indicators. These programs included vendor document tracking reports (part of industry operating events program), and preventive maintenance (PM) component basis feedback.

.4 Assessment of Safety-Conscious Work Environment

a. Inspection Scope

The team performed a review of the employee concern program known as SafeTeams and conducted individual interviews of 28 licensees personnel. The interviewees represented various functional organizations including radiation protection, operations, maintenance, security, and supervision. Several plant activities were also observed including Unit 1 plant startup and maintenance on a safety related diesel generator.

These interviews and observations were designed to elicit a qualitative assessment of the degree to which the interviewees believed station management had established and maintained a safety-conscious work environment.

In addition, the team reviewed the results of the licensee's 2008 and 2010 Nuclear Safety Culture Assessment results, as well as the licensee's actions to address identified concerns.

b. Assessment

Based on the results of the safety culture surveys and the focus groups, the team found that the licensee's programs had established a healthy safety-conscious work environment in that every worker who had been interviewed by the team indicated they felt free to raise safety concerns both to their management and to the NRC without fear of retaliation. Workers felt comfortable using all avenues available to them in raising

concerns that included writing condition reports, talking with their supervisors, informing SafeTeam or management, and raising concerns with the NRC.

The team determined that individuals interviewed were collectively and individually willing to raise nuclear safety concerns, knew of various ways to document concerns, had not individually experienced retaliation for bringing up issues, and believed that the licensee's management generally supported employees raising nuclear safety concerns.

.5 Specific Issues Identified During This Inspection

a. Failure to Conclude a Change to the Final Safety Analysis Report Required Prior NRC Review and Approval

Introduction. The team identified a Severity Level IV noncited violation of 10 CFR 50.59, "Changes, Tests, and Experiments," associated with the failure to conclude that a change from the Final Safety Analysis Report did not require prior NRC review and approval prior to implementation.

Description. The design function of the diesel generator jacket water cooling system is to remove heat generated from operation of the safety related diesel generators under transient and accident conditions including design basis accidents and loss-of-offsite power. The licensee performed evaluation EV-2002-001666-02 that established a new leakage rate of 2.4 gallons per hour as the maximum jacket water leakage rate to maintain operability. This value was based on conditions where the jacket water level in the standpipe was assumed to be at the low-level alarm set point with no operator interaction for 7 days. This leakage rate was obtained from calculation ME-CA-0000-5016, which had determined that the leakage rate of 1.5 gallons per hour, specified in Final Safety Analysis Report Section 9.5.5.2, was a conservative acceptance criterion.

On March 13, 2004, the licensee performed an applicability screening, in accordance with their 50.59 Resource Manual, prior to changing the acceptance criterion for allowable jacket water leakage rate in the Final Safety Analysis Report, but incorrectly concluded that an evaluation was not required for a change that involved manual operator actions and a change to the allowable jacket water leak rate in support of a design function that is credited in the Final Safety Analysis Report.

The licensee concluded that the proposed activity to increase the allowable leakage rate did not involve a change to a structure, system, or component that adversely affected a Final Safety Analysis Report described design function; as a result, the licensee did not perform an evaluation to determine whether the proposed activity required NRC review and approval prior to implementation. Subsequently, the licensee changed the Final Safety Analysis Report from "there is potentially 310 gallons of water available to replace a leakage up to 1.5 gallons per hour for seven (7) days of continuous operation" to "there is potentially 408 gallons of water available to replace a leakage up to 17 gallons per hour for 24 hours of continuous operation." To change the leakage rate, the licensee evaluation EV-CR 2004-000430-01-12, the licensee credited manual "operator action to

refill the jacket water system 24 hours post-accident to make-up the jacket water system" to further justify the new acceptance criterion.

Regulatory Guide 1.187, "Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments," stated that Nuclear Energy Institute NEI 96-07, "Guidelines for 10 CFR 50.59 Evaluations," provides methods that are acceptable to the NRC staff for complying with the provisions of 10 CFR 50.59.

Using the guidance provided in NEI 96-07, the team determined that the proposed activity, changing the acceptance criterion for allowable jacket water leakage in the Final Safety Analysis Report, screened in because the activity affected a design function of a structure, system, or component (i.e., the ability to remove heat from the diesel generators during operation) by substituting manual action by the operators to make up for increase jacket water leakage. Screening is performed by the licensee to determine proposed activity should be evaluated against the criteria specified in 10 CFR 50.59(c)(2).

A 10 CFR 50.59 evaluation is required for changes that adversely affect design functions. The team determined the change was adverse and required an evaluation because the change involved the addition of manual operator action to refill the jacket water system after 24 hours post-accident. Further, the team concluded that the change resulted in a more than minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component important to safety because the change involved substituting manual operation action to support a design function credited in the Final Safety Analyses Report. Because the activity resulted in a more than minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component important to safety, the licensee must apply for and obtain a license amendment per 10 CFR 50.90 before implementing the activity. The licensee entered this issue into the corrective action program as Condition Report CR 2011-008509.

Analysis. The failure of the licensee to adequately evaluate implementing a change to the Final Safety Analysis Report concerning a change in acceptable jacket water leak rate and addition of manual actions to refill the jacket water system after 24 hours following a loss of offsite power, was contrary to 10 CFR 50.59(c)(2) and was a performance deficiency. This finding was more than minor because there was a reasonable likelihood that the change would require a prior NRC approval. Violations of 10 CFR 50.59 are violations that potentially impede or impact the regulatory process and are processed through Traditional Enforcement. As required by Section 7.3 of the Enforcement Policy, the team performed a Phase 1 screening in accordance with Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," to determine the significance of the finding. The team determined that the finding is of very low safety significance (Green) because the finding: (1) was not a design or qualification issue confirmed not to result in a loss of operability or functionality; (2) did not represent an actual loss of safety function of the system or train; (3) did not result in the loss of one or more trains of nontechnical specification equipment; and (4) did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. Since violations of Title 10 CFR 50.59 may

result in conditions evaluated as having very low safety significance by the Significance Determination Process, the team categorized the finding as Severity Level IV in accordance with the Enforcement Manual. The finding was a violation determined to be of very low safety significance, was not repetitive or willful, and was entered into the corrective action program. Therefore, this violation is being treated as a noncited violation consistent with the NRC Enforcement Policy.

The performance deficiency is more than minor because there was a reasonable likelihood that the change would require a prior NRC approval. Violations of 10 CFR 50.59 are violations that potentially impede or impact the regulatory process and are processed through traditional enforcement. Violations of 10 CFR 50.59 are processed through examples of Section 6.1 of the Enforcement Policy, and although the significance determination process is not designed to assess the significance of violations that potentially impact or impede the regulatory process, the staff has determined that the significance of a 10 CFR 50.59 violation can be accessed through the significance determination process. Therefore, the team performed a Phase 1 screening in accordance with NRC Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," to determine the significance of the finding. The team determined that the finding was of very low safety significance (Green) because the finding: (1) was not a design or qualification issue confirmed not to result in a loss of operability or functionality; (2) did not represent an actual loss of safety function of the system or train; (3) did not result in the loss of one or more trains of nontechnical specification equipment; and (4) did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

Since the violations of 10 CFR 50.59 resulted in a condition evaluated as having very low safety significance by the significance determination process, the team categorized the finding as Severity Level IV in accordance with the Enforcement Manual. The finding was a violation determined to be of very low safety significance, was not repetitive or willful, and was entered into the corrective action program. Therefore, this violation is being treated as a noncited violation consistent with the NRC Enforcement Policy. The team did not identify a crosscutting aspect with this finding since this performance issue occurred in 2004 and is not reflective of current performance.

Enforcement. Title 10 CFR 50.59(c)(1), "Changes, Tests, and Experiments," states, in part, that a licensee may make changes in the facility as described in the Final Safety Analysis Report (as updated) without obtaining a license amendment only if the change does not result in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component important to safety previously evaluated in the Final Safety Analysis Report (as updated). Contrary to this requirement, on September 28, 2004, the licensee made changes to the facility as described in the final safety analysis report (as updated) without obtaining a license amendment. Specifically, the licensee made changes to the acceptance allowable diesel generator jacket water leakage in the Final Safety Analysis Report by substituting manual operator action for increase jacket water leakage that resulted in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system,

or component important to safety. Because this finding is of very low safety significance and was entered into the corrective action program as Condition Report CR 2011-008509, this violation is being treated as a noncited violation in accordance with Section 2.3.2 of the Enforcement Manual: NCV 05000445/2011006-01; 05000446/2011006-01, "Failure to Conclude a Change to the Final Safety Analysis Report Required Prior NRC Review and Approval."

b. Inadequate Diesel Generator Jacket Water Fill Instructions

Introduction. The team identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to have documented instructions for an activity affecting quality. Specifically, the licensee did not have documented instructions for filling the diesel generator jacket water system when the normal fill method would not be available during a loss of offsite power.

Description. On July 27, 2011, the team reviewed Procedure SOP-609A/B, "Diesel Generator System," Revision 12 and Procedure ALM-1301A/B, "Alarm Procedure Diesel Generator 1-01 Panel, Revision 5," to verify the compensatory measures that credited operator action to fill the diesel generator jacket water system to compensate for system leaks up to 17 gallons per hour. The team reviewed the diesel generator operating series of procedures and the diesel generator alarm panel series of procedures and identified that the procedures did not contain guidance on how to fill the jacket water system during a condition where offsite power is not available. The procedures only had guidance to fill the jacket water system using nonsafety-related equipment that did not have an emergency power source. The team identified that the licensee had not considered a scenario, in which offsite power would not be available to provide normal makeup water and that alternative methods would be necessary. The team determined that the licensee had implemented a change to the safety analysis in 2004, without an adequate review of the design change. As a result of the team's questions, the licensee documented this issue in Condition Report CR 2011-0008510.

Analysis. The licensee's failure to have adequate instructions for filling the diesel generator jacket water system was a performance deficiency. The performance deficiency was more than minor because it was associated with the procedure quality attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using NRC Manual Chapter 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance because the finding did not result in an actual loss of safety related equipment for greater than the technical specification allowed outage time and did not represent a loss of equipment designated as risk-significant in the maintenance rule. The finding did not have a crosscutting aspect because it was not representative of current licensee performance.

Enforcement. Title 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, that activities affecting quality shall be prescribed by documented instructions of the type appropriate to the circumstances. Contrary to the

above, as of July 27, 2011, the licensee failed to have adequate instructions for filling the diesel generator jacket water system, an activity affecting quality, during a loss-of-offsite power. Since the violation was of very low safety significance and was documented in the licensee's corrective action program as Condition Report CR 2011-008510, it is being treated as a noncited violation, consistent with Section 2.3.2 of the NRC Enforcement Policy: NCV 05000445/2011006-02; 05000446/2011006-02, "Inadequate Diesel Generator Jacket Water Fill Instructions."

c. Failure to follow Operability Determination Process for Degraded Diesel Generators

Introduction. The inspector identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure of the licensee to follow Procedure ODA-309, "Operability Determination and Functionality Assessment Program." Specifically, the licensee did not appropriately evaluate a long-standing degraded condition such that appropriate measures were taken to ensure the safety related diesel generator would remain operable for the mission time, as required by Procedure ODA-309.

Description. During interviews with licensee personnel and reviews of selected operability determinations, the team noted a long-standing degraded condition with the licensee's diesel generators. The team was informed by the licensee that this condition was well documented and was an industry wide issue.

On July 12, 2011, the team expressed the concern that the history of frequent cam cover bolt failures could potentially impact the ability of safety related diesel generators to perform their safety function for the mission time. The team identified that the licensee failed to appropriately consider the impact to operability of this condition within the mission time. Section 6.2.2 of Procedure ODA 309 states, in part, that if conditions impact or potentially impact the ability of the technical specification structure, system or component to perform its required function for the credited time duration (mission time), then measures are needed to ensure the component will remain operable to provide the specified safety function with the degraded or nonconforming condition for the required mission time. In addition, Section 6.2.2 of Procedure ODA 309 also requires that appropriate actions be taken if compensatory measures are required to maintain operability. The concerns of the team regarding cam cover bolts failure rates were documented on Condition Report CR 2011-007850.

The team reviewed Smart Form Technical Evaluation TE 95-0030 dated March 3, 1995, which was used to justify operability. The evaluation provided an analysis of the safety related diesel generator cam cover bolts and stated the minimum number of bolts required to maintain the cam cover joint seal was based upon the maximum loading on the cover plate. The licensee evaluation concluded that the cover plate joint was acceptable and the safety related diesel generator would remain operable as long as at least five bolts remained intact on each of the top or bottom of the covers. However, the licensee did not consider the failure rate in the operability determination. The team determined that the licensee did not use conservative decision making since the cam cover bolts failures were a long standing condition and could be replaced when found

broken. As a result, the licensee did not appropriately consider the mission time to support the design function of safety related diesel generator in the operability determination.

As a result of the team's questions, the licensee completed a new operability determination and determined that the condition required compensatory measures for the safety related diesel generator to remain operable during the mission time including replacing bolts while a diesel generator was running. In addition, procedures were changed to provide operators with instructions to specifically look for and identify bolt failures while the diesel generators are running. The licensee also replaced all existing safety related diesel generator cam cover bolts. The team observed this activity and verified that replacement of cam cover bolts on an operating diesel was plausible.

Analysis. The failure to perform an adequate operability determination on the safety related diesel generator was a performance deficiency. This finding was more than minor because it was associated with the equipment performance attribute of the Mitigating System Cornerstone and affected the cornerstone objective to ensure the availability and reliability of safety related diesel generators that respond to initiating events to prevent undesirable consequences in that the safety related diesel generators supply power to vital and safety related loads. Specifically, the operability determination did not ensure that the safety related diesel generators would remain operable for their mission time and perform their safety function.

The Manual Chapter 0609, Attachment 4, "Phase 1 Initial Screening, and Characterization of Findings," was not well suited for this finding and a Phase 3 Risk Significance Estimation was required. A Region IV senior reactor analyst performed a bounding Phase 3 significance determination. The analyst estimated a bounding change in core damage frequency (delta-CDF) for the performance deficiency using the following assumptions:

- Based on calculations performed by the licensee, a total of 5 bolt failures on the top or the bottom of the cam cover were sufficient to cause failure of the diesel generator.

- The exposure period was one year.

- A bolt failure history over the past five years was used and a bounding assumption made that all failures are assumed to be on the top of one of the 4 cam covers on each safety related diesel generator. Therefore, any safety related diesel generator start that had 5 bolt failures was assumed to cause a safety related diesel generator failure.

- The safety related diesel generator recovery following failure from a cam cover failure was assumed to follow the nominal recovery probabilities. This assumption would be important only for cutsets where both safety related diesel

- generators fail to run from the bolt failures and represented a small portion of the delta-CDF. Otherwise, the other safety related diesel generator was available for recovery.

Data was reviewed over a 5-year period for all four safety related diesel generators at the site. There were no cases where more than 3 bolts failed during a single safety related diesel generator run. During this time, the safety related diesel generators were run an estimated 300 times collectively with no failures of the cam cover seals. As a bounding assumption, the analyst assumed that the probability that a safety related diesel generator would fail from a cam cover failure is 1/150 or 6.7E-3 (equivalent to 2 failures in 300 runs).

Most safety related diesel generator runs are for less than 24 hours; therefore, it was likely that additional bolt failures would occur in the 24-hour period following an actual event than were reported in the data. However, whenever the safety related diesel generators were running, they were inspected continuously, and it was demonstrated that bolt failures can be detected and the bolts can be replaced while the safety related diesel generators continued to run. The analyst concluded that these two effects cancel out and that the bolt failure data was representative of the expected 24-hour performance. The probability of the fail-to-run basic event for both safety related diesel generators was increased by 6.7E-3 in the Comanche Peak simplified plant analysis risk (SPAR) model, Revision 8.15; the model was run at a truncation of 1.0E-12, with average test and maintenance. The result of the Phase 3 bounding analysis resulted in a delta-CDF of 6.7E-7/year, indicating this finding is of very low safety significance (Green).

The SPAR model included the contribution of the recently installed alternate power generators, which lowers significantly the risk significance of a safety related diesel generator failure for the station blackout sequences, which comprise the majority of the risk of this finding. The team determined that there was a cross cutting aspect in the area of human performance decision-making because the licensee failed to use conservative assumptions in decision making in the assessment of operability [H.1(b)].

Enforcement. Title 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” requires, in part, that activities affecting quality shall be prescribed by documented instructions, procedures or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures or drawings. Contrary to the above, prior to July 12, 2011, the licensee did not adequately implement the requirements of operability determination process in accordance with Procedure ODA 309. Specifically, Section 6.2.2 of ODA 309 requires the licensee to assess degraded and nonconforming conditions to consider mission time and establish compensatory measures as interim actions to maintain, enhance, or restore operability of safety-related equipment until final corrective actions have been completed. Because the finding is of very low safety significance and has been entered into the licensee’s corrective action program as Condition Reports CR 2011-007850 and CR 2011-008508, this violation is being treated as a noncited violation consistent with

Section 2.3.2 of the NRC Enforcement Policy: NCV 05000445/2011006-03; 05000446/2011006-03, "Failure to follow Operability Determination Process for Degraded Diesel Generators."

d. Repeated Diesel Generator Cam Cover Bolt Failures

Introduction. The team identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," in that the licensee did not correct a condition adverse to quality regarding the safety related diesel generators.

Description. During reviews of the corrective actions for selected safety related systems, the team noted several condition reports that documented repeated failures of components such as cam cover bolt failures, after running the safety related diesel generators. The safety related diesel generators each have eight large cam covers fastened by twenty-six bolts around a cover's perimeter. Operability of the safety related diesel generator may be impacted if these covers become loose since cam covers are required to ensure a mechanical pressure boundary so that a slight vacuum is maintained on the crankcase. The cam covers also function to keep air out and oil in to prevent a potentially hazardous combustible mixture. The configuration of the bolts was nine bolts across the top side of the cam cover, nine bolts across the bottom row, and four bolts on each of the shorter sides.

Procedure STA-422, "Processing Condition Reports", Revision 25, describes a level "C" condition, as a condition that involves minimal impact on safe reliable plant operation and is of low safety significance that an apparent cause determination is not required. The team determined that, although the licensee had identified each instance of a cam cover bolt failure, the condition adverse to quality was not corrected in a timely manner, as made evident by the recurrence and the failure to evaluate the condition adverse to quality in accordance with the site corrective action process. The team determined that cam bolt failures, based on the number and repeated nature of the issue, should have been classified as a higher condition report and should not have continued to have been treated as having minimum impact to safe reliable operation or that an apparent cause determination was not required. The team noted that all cam cover bolts failure conditions had been assigned "C" or "D" level condition reports. Further, the team determined Procedure STA-422 prescribed that an apparent cause of the issue be documented (if categorized a Category B condition, which is a higher category), and corrective actions taken to correct the condition and to address the apparent cause(s). The team noted that an apparent cause evaluation had not been performed.

In 1995, because of repeated bolt failures, the licensee concluded that the cover plate joint was acceptable and that the safety related diesel generators would remain operable with five bolts intact on each of the top or bottom of each cover. Following routine operations of the safety related diesel generators, the licensee replaced the broken bolts when found. However, the licensee failed to consider the recurring aspect of the problem and its effect on functionality. As a result, the licensee failed to thoroughly evaluate and address the impact to operability associated with the potential for cam cover bolt failures over a long period of operation.

Based on the number of cam cover bolts failures identified by licensee since 1995 to July 2011, the team determined that the licensee did not implement actions to correct the repeated failures in accordance with Procedure STA–422. As a result, there were additional occurrences of cam bolt failures from the operation of the safety related diesel generators, that could have impacted the safety related diesel generators' operability.

Analysis. The team determined that the failure to implement corrective action for the cam cover bolt failures was a performance deficiency. This finding was more than minor because, if left uncorrected, the performance deficiency would have the potential to lead to a more significant concern. The NRC Manual Chapter 0609, Attachment 4, "Phase 1 Initial Screening and Characterization of Findings," was not well suited for this finding and it required a Phase 3 Risk Significance Estimation. A Region IV senior reactor analyst performed a bounding Phase 3 significance determination. The analyst estimated a bounding change in core damage frequency (delta-CDF) for the performance deficiency using the following assumptions:

- Based on calculations performed by the licensee, a total of 5 bolt failures on the top or the bottom of a cam cover were sufficient to cause failure of a safety related diesel generator.

- The exposure period was one year.

- A bolt failure history over the past five years was used and a bounding assumption made that all failures are assumed to be on the top of one of the 4 cam covers on each safety related diesel generator. Therefore, any safety related diesel generator start that had 5 bolt failures was assumed to cause a safety related diesel generator failure.

- The safety related diesel generator recovery following failure from a cam cover failure was assumed to follow the nominal recovery probabilities. This assumption would be important only for cutsets where both safety related diesel generators fail to run from the bolt failures and represented a small portion of the delta-CDF. Otherwise, the other safety related diesel generator was available for recovery from some other problem.

Data was reviewed over a 5-year period for all four safety related diesel generators at the site. There were no cases where more than 3 bolts failed during a single safety related diesel generator run. During this time, the safety related diesel generators were run an estimated 300 times collectively with no failures of the cam covers. As a bounding assumption, the analyst assumed that the probability that a safety related diesel generator would fail from a cam cover failure is 1/150 or 6.7E-3 (equivalent to 2 failures in 300 runs).

Most safety related diesel generator runs are for less than 24 hours; therefore, it was likely that additional bolt failures would occur in the 24-hour period following an actual event than were reported in the data. However, whenever the safety related diesel generators were running, they were inspected continuously, and it was demonstrated

that bolt failures can be detected and the bolts can be replaced while an safety related diesel generator continued to run. The analyst concluded that these two effects cancel out and that the bolt failure data was representative of the expected 24-hour performance. The probability of the fail-to-run basic event for both safety related diesel generators was increased by 6.7E-3 in the Comanche Peak SPAR model, the model was run at a truncation of 1.0E-12, with average test and maintenance. The result of the Phase 3 bounding analysis resulted in a delta-CDF of 6.7E-7/year, indicating this finding is of very low safety significance (Green).

The SPAR model included the contribution of the recently installed alternate power generators, which lowers significantly the risk significance of a safety related diesel generator failure for the station blackout sequences, which comprise the majority of the risk of this finding.

The team determined that there was a cross cutting aspect in the area of problem identification and resolution because the licensee failed to thoroughly evaluate problems such that the resolutions address causes and extent of conditions, as necessary [P.1(c)].

Enforcement. The team identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," which states, in part, that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. Contrary to the above, the licensee failed to assure that conditions adverse to quality were promptly identified and corrected. Specifically, as of July 12, 2011, the licensee failed to assure that the identified broken cam cover bolts on the safety related diesel generators were effectively corrected. This finding was entered into the licensee's corrective action program as Condition Report 2011-008505. Because this violation was of very low safety significance (Green) and has been entered into the licensee's corrective action program, this violation is being treated as a noncited violation, consistent with the NRC Enforcement Policy: NCV 05000445/2011006-04; 05000446/2011006-04, "Repeated Diesel Generator Cam Cover Bolt Failures."

4OA6 Meetings

Exit Meeting Summary

On July 28, 2011, the team presented the inspection results to Mitch L. Lucas, Site Vice President, and other members of the licensee staff. The licensee management acknowledged the issues presented. The team asked the licensee management if there were any materials in the procession of the team, which should be considered proprietary. No proprietary information was identified.

4OA7 Licensee-Identified Violations

None

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

D. Ambrose, Manager Corrective Action Program
J. Audas, Manager SafeTeam
C. Beerck, Senior Nuclear Auditor
C. Cummins, Supervisor Performance Improvement
D. Fuller, Manager Emergency Planning
T. Gibbs, SafeTeam Supervisor
T. Gilder, Director Performance Improvement
D. Goodwin, Director Engineering Support
J. Henderson, Manger Engineering Smart Team
M. Lucas, Site Vice President
M. Marler, Director Organization Effectiveness
G. Merka, Regulatory Affairs Engineer
C. Miller, Manager Plant Reliability
K. Nickerson, Director Site Engineering
B. Patrick, Director Maintenance
J. Patton, Manager Quality Assurance
W. Reppa, Manager System Engineering
J. Seawright, Regulatory Affairs Engineer
S. Sewell, Director Nuclear Operations
T. Terryah, Manager Engineering Smart Team
T. Tigner, Corrective Action Supervisor
D. Weyandt, Senior System Engineer
L. Zimmerman, Manager Procurement Engineering and Programs

NRC Personnel

B. Tindell, Resident Inspector
M. Hay, Acting Chief PSB-1

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000445/2011006-01 05000446/2011006-01	NCV	Failure to Conclude a Change to the Final Safety Analysis Report Required Prior NRC Review and Approval (Section 4OA2.5a)
05000445/2011006-02 05000446/2011006-02	NCV	Inadequate Diesel Generator Jacket Water Fill Instructions (Section 4OA2.5b)
05000445/2011006-03 05000446/2011006-03	NCV	Failure to Follow Operability Determination Process for Degraded Safety Related Diesel Generators (Section 4OA2.5c)
05000445/2011006-04 05000446/2011006-04	NCV	Repeated Diesel Generator Cam Cover Bolt Failures (Section 4OA2.5d)

LIST OF DOCUMENTS REVIEWED

Section 4OA2: Identification and Resolution of Problems

PROCEDURES

NUMBER	TITLE	REVISION / DATE
STA-213	Correspondence with Regulatory Agencies and Industry Groups	3
ODA-104	Operations Department Document Control	14
STA-201	Procedure Use and Adherence	16
STA-424	Self-Assessment and Benchmarking Programs	5
NMG-130	CPNPP Observation Program	July 7, 2011
ECE-5.01-04	Technical Evaluation of Replacement Items (TERI)	November 9, 2009
SEC-108	Security Field Report, Condition Report, and Security Reporting Requirements	10
ASG-025	Safeguards Information Records Processing Guideline	8
STA-308	Protection of Safeguards Information and Safeguards Information – Modified	13
MSM-C0-3345	Emergency Diesel Engine Crankcase Relief Valve Inspection	2
SOP-609A	Diesel Generator System	20
SOP-609B	Diesel Generator System	12
ALM-1301A	Alarm Procedure Diesel Generator 1-01 Panel	5
ALM-1302A	Alarm Procedure Diesel Generator 1-02 Panel	5
ALM-1301B	Alarm Procedure Diesel Generator 2-01 Panel	3

ALM-1302B	Alarm Procedure Diesel Generator 2-02 Panel	2
NQA-2.08	Nuclear Industry Cooperative Audits	13
STA-114	Employee Concerns and Employee Protection	
NQA-3.02	Audit and Surveillance Programs	6
EVAL-2011-003	Emergency Planning Changes	January 19, 2011
QA 20110105	QA Surveillance Follow-up	January 5, 2011
SA-2010-027	Self-Assessment of Flow Accelerated Corrosion Program (CR-2010-001181)	February 5, 2010
WCI-607	Fluid Leak Management Process	2
NMG-705	Corrective Action Review Board (CARB) Process	February 17, 2011
Roll-up Meeting Summary	Center Of Excellence Periodic Report	February 22, 2011
ODA-309	Operability Determination and Functionality Assessment Program	2
STA-421	Initiation of Condition Reports	17
STA-426	Industry Operating Experience Programs	8
STA-602	Temporary Modifications and Transient Equipment Placements	16
STA-744	Maintenance Effectiveness Monitoring Program	5
CP-201100923	Two Year Rolling Audit Schedule	6
STA-705	Radioactive Systems Leakage Inspection Program	6
STA-206	Review of Vendor Documents and Vendor Technical Manuals	24
STA-422	Processing Condition Reports	25

DRAWINGS

NUMBER	TITLE	REVISION
M1-1900	Penetration Seal Schedule	CP-7

WORK ORDERS

NUMBER	
4078008	4077949

INFORMATION NOTICES

NUMBER	TITLE	DATE
2009-016	Spurious Relay Actuations Result in Loss of Power to Safeguard Buses	September 15, 2009
2009-21	Incomplete Medical Testing for Licensed Operators	September 30, 2009
2009-22	Recent Human Performance Issues at Nuclear Power Plants	October 2, 2009
2009-20	Degradation of Wire Rope Used in Fuel Handling Applications	October 7, 2009
2009-23	Nuclear Fuel Thermal Conductivity Degradation	October 8, 2009
2009-24	Sources of Information Related to Potential Cyber Security Vulnerabilities	October 13, 2009
2009-26	Degradation of Neutron-Absorbing Materials in the Spent Fuel Pool	October 28, 2009
2010-03	Failures of Motor operated Valves due to Degraded Stem Lubricant	February 2, 2010
2010-05	Management of Steam Generator Loose Parts and Automated Eddy Current Data Analysis	February 3, 2010
2010-07	Welding Defects in Replacement Steam Generator	April 5, 2010
2010-09	Importance of Understanding Circuit Breaker Control Power Indications	April 14, 2010
2010-10	Implementation of a Digital Control System Under 10 CFR 50.59	May 28, 2010
2010-12	Containment Liner Corrosion	June 18, 2010
2010-25	Inadequate Electrical Connections	November 17, 2010

OBSERVATIONS

NUMBER	TITLE	DATE
2011-2929	Material Condition; Manager and Supervisors	April 6, 2011
2011-3710	Eng04, Design Changes; Engineering	April 28, 2011
2011-4195	OMOP 11.3 Pre-Job Briefs Operations	April 24, 2011
2011-4229	Maintenance Interdepartmental Pre-Job Briefs	April 26, 2011
2011-4892	Team Observation Engineering	June 6, 2011

CONDITION REPORTS

2009-003470	2009-003479	2009-003786	2009-004311	2009-004817
2009-004819	2009-0054001	2009-005427	2009-005430	2009-005501
2009-005772	2009-005777	2009-006488	2009-008039	2009-008232
2010-001224	2009-001225	2009-004568	2010-004571	2010-005812
2010-006271	2010-010728	2010-007951	2010-009018	2009-004085
2010-011152	2010-003476	2011-002702	2011-004536	2011-007178

2010-009073	2010-004158	2011-006820	2011-007175	2011-007547
2011-007172	2011-006788	2009-003728	2011-007411	2011-005454
2011-001876	2011-007233	2011-007144	2011-005914	2010-009909
2010-006526	2011-007703	2011-005920	2010-000624	2009-008027
2010-010033	2009-08129	2010-010781	2010-007472	2011-002716
2010-010018	2010-005838	2010-009993	2010-009694	2010-007091
2010-003758	2010-010034	2009-008622	2010-010818	2009-002422
2010-005843	2011-003316	2011-008210	2011-007851	2010-005784
2010-003685	2010-003680	2010-004031	2010-002357	2010-003757
2010-007798	2010-008108	2010-001312	2011-008376	2010-004050
2011-000824	2009-002038	2010-001179	2009-001399	2011-000816
2003-001068	2011-002944	2010-010609	2010-006120	2010-008926
2010-008429	2011-000825	2011-000680	2011-000678	2010-000197
2010-008411	2009-005424	2010-001224	2011-004136	2010-002525
2010-005924	2011-007595	2011-008439	2007-000519	2010-005628
2010-001736	2011-007736	2011-007644	2011-007356	2010-005563
2011-003633	2010-005941	2010-006561	2010-003458	2010-010391
2009-006582	2010-001242	2010-010781	2010-006349	2011-002349
2010-004562	2010-009417	2010-003775	2010-003783	2010-008489
2010-002671	2009-006625	2009-008593	2010-003789	2010-009498
2009-005503	2010-008049	2010-011513	2010-002626	2011-002571
2010-006450	2009-004046	2009-004052	2009-004807	2011-004741
2011-002411	2009-006047	2010-001119	2010-004044	2011-004621
2010-003305	2010-007472	2010-010652	2010-011270	2011-004909
2010-006595	2011-004098	2011-001876	2010-011513	2011-005637
2009-001069	2009-008643	2010-000266	2010-000638	2011-005646
2009-004453	2010-003763	2010-006120	2010-006268	2011-005819
2009-005542	2009-000104	2009-000848	2009-000926	2009-001548
2009-002876	2009-004054	2009-005501	2009-004454	2009-005275
2009-006665	2010-000897	2011-005867	2009-004455	2004-000193
2010-005963	2010-004331	2009-006696	2010-007458	2007-001273
2010-002524	2010-001070	2011-003265	2011-000041	2011-001468

MISCELLANEOUS

NUMBER	TITLE	REVISION / DATE
ET31CQT091	Effective Issue Documentation Training	March 2, 2009
ET31CQT101	STA 206 Rev 23 VETIP Procedure Training	October 14, 2010
Operations Guideline 36	Operator Burdens and Work – Arounds	March 4, 2011
EV-2009-06	Audit on Licensing, Permits and Reporting	May 27, 2010
	Assessment Plans- Loss Prevention Performance Improvement Process	6

VL 07-001807	Letter from John Crane Company on Seal Information (CPES 200701528)	October 5, 2007
CR-2010-011152	Mid-Cycle Strategic Self-Assessment	February 24, 2011
QA 20100913	Tactical Self-Assessment CARB actions not corrected	September 13, 2010
EV-2010-007593	Tactical Self-Assessment Industry OE program	August 10, 2010
EV-2010-008110	Assessment of Level C- Vulnerabilities in Programs for Assessing 10CFR21 Reports (QA 20100527)	December 16, 2010
CPES-M-2012	Piping and Equipment Insulation	9
DBD-ME-229	Component Cooling Water System	36
NEI 97-07	Guidelines for 10 CFR 50.59 Evaluations	3
STARS-DTI-001	Desk Top Instruction for the Avoidance of Substantive Cross-Cutting Issues (SCCIs)	0
TB-09-4	Impact of Auxiliary Pump Heat on Westinghouse and Combustion Engineering Analyses/Methodologies	1
ME(B)-240	Condensate Storage Tank Tech. Spec. Limit	4
TDM-804A	CPSES: Technical Data Manual, Equipment Data: Tank Height vs. Volume, Unit 1	2
TDM-804B	CPSES: Technical Data Manual, Equipment Data: Tank Height vs. Volume, Unit 2	2
EV-CR-2011-004184-3	U2 DG Droop; Failure Analysis of L2-Auxiliary Switch	
EVAL-2010-006	Performance Indicator Process and Change Management	February 8, 2010
EV-CR-2010-006120-1	The NRC CDBI team identified a potential violation of Technical Specification SR 3.3.4.2.	
SA-CR-2010-011154	Conduct a Strategic Self-Assessment of the Maintenance Rule Program	
SA-CR-2010-010589	This condition report will document the planning, performance, and reporting of a Strategic Self-Assessment	
EV-CR-2010-008926-1	NRC IN2010-20: Turbine Driven Auxiliary Feedwater Pump Repetitive Failures	
EV-CR-2009-005424-01	The U.S. Nuclear Regulatory Commission (NRC) is issuing this information notice (IN) to alert addresses of an event at Point Beach Nuclear Plant (PBNP) in which spurious relay actuation resulted in the loss of offsite power to a safety-related 480 Volts alternating current (Vac) safeguards bus for more than 6 hours	

EV-CR-2011-004136-1, 2, 4	Valve 2-8000A (pressurizer block valve) failed to meet one of two requirements for the minimum thrust requirement in the closed direction	
NUREG/CR-6750	Performance of MOV Stem Lubricants at Elevated Temperatures	October 2001
EPG-03	Good Practice Engineering Program Guide: Motor-Operated Valves	
SA-2007-021	Motor Operated Valve Program	
EVAL-2007-002	Equipment Reliability	February 15, 2007
EV-CR-2009-003728	The SSW Discharge Valves (u-HV-4286 and u-HV-4287) are Fisher style 9200 Series which use an elastomer seat ring (not a full body liner) held in place by a bolted retaining ring.	
EV-CR-2010-005913	Since Surveillance Work Order 3774545 was not performed by 02/11/2011, the purpose of this QTE is to establish if 1CT-0309 is OPERABLE.	
EV-CR-2011-003308	Since the surveillance was missed on 2-HV-4572 during 2RF11, the purpose of this QTE is to evaluate the risk associated with the missed surveillance and document further the OPERABILITY of 2-HV-4572.	
EV-CR-2011-003605	Received CCP 2 L\O CLR SSW RET FLO LO alarm on 1-ALB-1 window 2.11.	
EV-CR-2006-001255	On the 30th of March Unit 1 responded to an alarm on 1-ALB-1 window 2.12 for SIP 2 L/O Clr SSW Ret Flo Lo Alarm.	
REI-701	SSW Water Hammer Test	0
EV-CR-2011-007598-22	During the performance of OPT-207B for Station Service Water Pump 2-02 (CP2-SWAPSW-02), vacuum breaker CP2-SWVAVB-04 did not break vacuum during Step 8.2.R. Reference CR-2010-008411.	
DBD-ME-233	Station Service Water System	21
EV-CR-2002-003545-8	During surveillance testing on CP1-SWVAVB-04, vacuum breaker failed to lift at desired set pressure range of 0.001 to 0.249 PSIV.	
EV-CR-2002-003545-1	QTE-2002-3545-01 provides the technical justification for SSW Operability with the Vacuum Breakers on the system stuck shut.	
EV-CR-2010-005628-4	Safety chiller 2-06 tripped on compressor high discharge temperature when all loads were removed from the chiller.	

EV-CR-2010-001588-24	At or around 8:10 am on 2/16/10 an employee was using a forklift in an attempt to load a Westinghouse training component onto a truck for transport… While lifting the load, it fell sideways from the forklift and struck the driver of the truck. The driver received a cut to his right ear.
EV-CR-2010-002235-4	On March 4, 2010, the Gantry crane was being used to move Unit 1 Turbine Auxiliary Lube Oil Motor 1-B for replacement. During the move, the crane came in contact with scaffolding. The contact with the scaffolding resulted in some minor damage to surrounding equipment including insulation, a sight glass, and a bent handwheel on 1-HD-0960. The control room received a momentary MSR high level alarm.
EV-CR-2010-003305-18	On April 5, 2010, the performance Unit 2 Train B Diesel Generator Integrated Test Sequence (ITS) Surveillance on 10/12/2009, the diesel did not shift to isochronous mode in the Loss of Offsite Power (LOOP) portion of the test.
EV-CR-2010-003783-7	On April 12, 2010 at approximately 0720, CPNPP experienced a line to insulator flashover between Startup Transformer XST1 and the 138 kV switchyard while Unit 2 was operating at 100% power.
EV-CR-2010-004194-3	On April 12, 2010, the CPNPP Operations Training Supervisor – Initial was notified that two of the nine applicants from License Class 18 had failed the simulator portion of the NRC operating license test.
EV-CR-2010-006268-22	On March 17, 2011, during the response to NRC IN 2010-11, Design Basis Engineering determined that neither Residual Heat Removal (RHR) train was capable of performing the required Emergency Core Cooling System (ECCS) injection function during at least three of the last four outages (2RF10, 1RF13, and 2RF11).
EV-CR-2011-000356-8	On January 13, 2011, Shift Operations discovered relay 27-1/1A1 PROTECTIVE RELAY FOR REACTOR TRIP severely chattering.
EV-CR-2011-001742-2	During the February 2011 Triennial Fire Inspection, CPNPP received a Green Cited Violation due to a repeat problem from the 2008 Triennial Fire Inspection for failing to verify Station Service Water (SSW) flow to an operating Diesel Generator within the required time line.

EV-CR-2009-004885-00	CST: Calculation ME-CA-00005295 (Comanche Peak Unit 1 Minimum CST Volume for RSG/Uprate) does not appear to account for leakage from the Auxiliary Feedwater pump seals.	
EV-CR-2010-010781-5	Perform and Document Root Cause Analysis	
OE 26026	Painting Activities and Cleaning Agents Render Emergency Diesel Generators inoperable	August 17, 2009

Information Request
May 18, 2011, 2010
Biennial Problem Identification and Resolution Inspection – Comanche Peak
Inspection Report 2011006

This inspection will cover the period from July 27, 2009 to July 29, 2011. All requested information should be limited to this period unless otherwise specified. To the extent possible, the requested information should be provided electronically in Adobe PDF or Microsoft Office format. Lists of documents should be provided in Microsoft Excel or a similar sortable format.

A supplemental information request will likely be sent during the week of June 6, 2011.

Please provide the following no later than June 3, 2011.

1. Document Lists

Note: for these summary lists, please include the document/reference number, the document title or a description of the issue, initiation date, and current status. Please include long text descriptions of the issues.

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 which were upgraded or downgraded in priority/significance during the period

d. Summary list of all corrective action documents that subsume or "roll up" one or more smaller issues for the period

e. Summary lists of operator workarounds, engineering review requests and/or operability evaluations, temporary modifications, and control room and safety system deficiencies opened, closed, or evaluated during the period

f. Summary list of plant safety issues raised or addressed by the Employee Concerns Program (or equivalent)

g. Summary list of all Apparent Cause Evaluations completed during the period

h. Summary list of all Root Cause Evaluations planned or in progress but not complete at the end of the period

2. Full Documents, with Attachments

a. Root Cause Evaluations completed during the period

b. Quality assurance audits performed during the period

c. All audits/surveillances performed during the period of the Corrective Action Program, of individual corrective actions, and of cause evaluations

d. Corrective action activity reports, functional area self-assessments, and non-NRC third party assessments completed during the period (do not include INPO assessments)

e. Corrective action documents generated during the period for the following:

- NCV's and Violations issued to Comanche Peak
- LER's issued by Comanche Peak

f. Corrective action documents generated for the following, if they were determined to be applicable to Comanche Peak (for those that were evaluated but determined not to be applicable, provide a summary list):

- NRC Information Notices, Bulletins, and Generic Letters issued or evaluated during the period
- Part 21 reports issued or evaluated during the period
- Vendor safety information letters (or equivalent) issued or evaluated during the period
- Other external events and/or Operating Experience evaluated for applicability during the period

g. Corrective action documents generated for the following:

- Emergency planning drills and tabletop exercises performed during the period
- Maintenance preventable functional failures which occurred or were evaluated during the period
- Adverse trends in equipment, processes, procedures, or programs which were evaluated during the period
- Action items generated or addressed by plant safety review committees during the period

3. <u>Logs and Reports</u>

a. Corrective action performance trending/tracking information generated during the period and broken down by functional organization

b. Corrective action effectiveness review reports generated during the period

c. Current system health reports or similar information

d. Radiation protection event logs during the period

e. Security event logs and security incidents during the period (sensitive information can be provided by hard copy during first week on site)

f. Employee Concern Program (or equivalent) logs (sensitive information can be provided by hard copy during first week on site)

g. List of Training deficiencies, requests for training improvements, and simulator deficiencies for the period

4. Procedures

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 which implement the corrective action program at Comanche Peak.

b. Quality Assurance program procedures

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

b. Organization charts for plant staff and long-term/permanent contractors

c. List of Corrective actions documented between April 2006 – April 2011 associated with the following risk significant systems:

- Emergency Diesel Generators
- Safety Related Service Water System

Note: "Corrective action documents" refers to condition reports, notifications, action requests, cause evaluations, and/or other similar documents, as applicable to Comanche Peak.

As it becomes available this information should be uploaded on the Certrec IMS website. When these documents have been compiled but no later than June 3, 2011, please download these documents onto a CD and sent it via overnight carrier to:

John Reynoso
U.S. NRC Region IV
612 E. Lamar Blvd.
Suite 400
Arlington, TX 76011

Please note that the NRC is not able to accept electronic documents on thumb drives or other similar digital media. However, CDs and DVDs are acceptable.