UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
1600 E. LAMAR BLVD.
ARLINGTON, TX 76011-4511

April 21, 2014

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 INTEGRATED INSPECTION REPORT 05000445/2014002 AND 05000446/2014002

Dear Mr. Flores:

On March 27, 2014, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at the Comanche Peak Nuclear Power Plant, Units 1 and 2. On March 26, 2014, the NRC inspectors discussed the results of this inspection with Mr. K. Peters, Site Vice President, and other members of your staff. Inspectors documented the results of this inspection in the enclosed inspection report.

NRC inspectors documented one finding of very low safety significance (Green) in this report. This finding involved a violation of NRC requirements. The NRC is treating this violation as a non-cited violation (NCV) consistent with Section 2.3.2.a of the Enforcement Policy.

If you contest the violation or significance of this NCV, 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, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; 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 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, Units 1 and 2.

In accordance with Title 10 of the *Code of Federal Regulations* 2.390, “Public Inspections, Exemptions, Requests for Withholding,” 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's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Wayne C. Walker, Branch Chief
Project Branch A
Division of Reactor Projects

Docket Nos.: 50-445, 50-446
License Nos.: NPF-87, NPF-89

Enclosure: Inspection Report 05000445/2014002 and 05000446/2014002
w/Attachment: Supplemental Information

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Publicly Avail.	☑Yes ☐ No	Sensitive	☐Yes ☑ No	Sens. Type Initials	RDA

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JKramer	RKumana	RAlexander	TFarnholtz	JDixon	VGaddy
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C:DRS/PSB1	C:DRS/PSB2	C:DRS/TSB	BC:DRP/A		
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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket:	05000445, 05000446
License:	NPF-87, NPF-89
Report:	05000445/2014002 and 05000446/2014002
Licensee:	Luminant Generation Company LLC
Facility:	Comanche Peak Nuclear Power Plant, Units 1 and 2
Location:	6322 N. FM-56, Glen Rose, Texas
Dates:	January 1 through March 27, 2014
Inspectors:	J. Kramer, Senior Resident Inspector R. Kumana, Resident Inspector
Approved By:	Wayne Walker Chief, Project Branch A Division of Reactor Projects

SUMMARY

IR 05000445/2014002, 05000446/2014002; 01/01/2014 - 03/27/2014; Comanche Peak Nuclear Power Plant, Units 1 and 2; Integrated Inspection Report, Follow-up of Events and Notices of Enforcement Discretion.

The inspection activities described in this report were performed between January 1, 2014, and March 27, 2014, by the resident inspectors at the Comanche Peak Nuclear Power Plant and inspectors from the NRC's Region IV office. One finding of very low safety significance (Green) is documented in this report. This finding involved a violation of NRC requirements. 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's Enforcement Policy. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process."

Cornerstone: Barrier Integrity

- Green. The inspectors reviewed a self-revealing non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to follow procedure for performing surveillance testing of the containment emergency air locks. Specifically, licensee personnel failed to fully close the Unit 1 containment emergency airlock exterior door and equalizing valve after performance of a door seal leak surveillance test. As a result, the containment emergency air lock exterior door was inoperable. Upon discovery, the licensee properly closed the containment emergency airlock door. The licensee entered the finding into the corrective action program as Condition Report CR-2013-000264.

  The finding was more than minor because it was associated with the human performance attribute of the Barrier Integrity cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that containment physical design barriers protect the public from radionuclide releases caused by accidents or events. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and Appendix A, Exhibit 3, "Barrier Integrity Screening Questions," the finding was determined to be of very low safety significance (Green) because the finding did not represent an actual open pathway in the physical integrity of reactor containment. The finding has a human performance cross-cutting aspect associated with resources, in that, the licensee failed to ensure that equipment and procedures were adequate to support nuclear safety [H.1]. (Section 4OA3)

PLANT STATUS

Unit 1 began the inspection period at approximately 100 percent power. On January 6, 2014, operators reduced power to approximately 68 percent in response to a loss of seal water on heater drain pump 1-02. The unit returned to approximately 100 percent power on January 8, 2014. On January 15, 2014, operators reduced power to approximately 62 percent to perform a suction bellows repair of heater drain pump 1-02. The unit returned to approximately 100 percent power the next day. On January 18, 2014, the unit experienced an automatic reactor trip as a result of a main generator fault and turbine trip. On January 20, 2014, operators performed a reactor startup and placed the unit on the grid. The unit achieved approximately 100 percent power on January 22, 2014, and operated at that power level for the remainder of the inspection period.

Unit 2 began the inspection period at approximately 100 percent power. On February 2, 2014, operators reduced power to approximately 63 percent in response to a turbine plant cooling water leak on a main generator hydrogen cooler. The unit returned to approximately 100 percent power the next day. On February 4, 2013, operators reduced power to approximately 76 percent power in response to a failure of the condensate low pressure heater bypass valve. The unit returned to approximately 100 percent power the next day and operated at that power level for the remainder of the inspection period.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R04 Equipment Alignment (71111.04)

a. Inspection Scope

The inspectors performed partial system walkdowns of the following risk-significant systems:

- January 29, 2014, Unit 1, containment spray pumps 1-01 and 1-03 following a maintenance outage of the pumps
- January 29, 2014, Unit 2, diesel generator 2-02 and the turbine driven auxiliary feedwater pump when diesel generator 2-01 was unavailable as a result of a jacket water leak
- February 27, 2014, Unit 2, motor driven auxiliary feedwater pump 2-02 when motor driven auxiliary feedwater pump 2-01 was inoperable as a result of testing

The inspectors reviewed the licensee's procedures and system design information to determine the correct lineup for the systems. The inspectors verified that critical portions of the systems were correctly aligned for the existing plant configuration.

These activities constitute completion of three partial system walkdown samples as defined in Inspection Procedure 71111.04.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

.1 Quarterly Inspection

a. Inspection Scope

The inspectors evaluated the licensee's fire protection program for operational status and material condition. The inspectors focused their inspection on the following plant areas important to safety:

- February 27, 2014, fire zone 2SG10A, diesel generator 2-01 room
- February 27, 2014, fire zone 2SI12A, diesel generator 2-02 room
- March 27, 2014, fire zone 2SB8, safeguards building 810 corridor
- March 27, 2014, fire zone AA21B, auxiliary building 810 corridor

For each area, the inspectors evaluated the fire plan against defined hazards and defense-in-depth features in the licensee's fire protection program. The inspectors evaluated control of transient combustibles and ignition sources, fire detection and suppression systems, manual firefighting equipment and capability, passive fire protection features, and compensatory measures for degraded conditions.

These activities constitute completion of four quarterly inspection samples as defined in Inspection Procedure 71111.05.

b. Findings

No findings were identified.

.2 Annual Inspection

a. Inspection Scope

On February 11, 2014, the inspectors completed the annual evaluation of the licensee's fire brigade performance. This evaluation included observation of an unannounced fire drill for a fire in the Unit 1 turbine driven auxiliary feedwater pump room on February 11, 2014.

During this drill, the inspectors evaluated the capability of the fire brigade members, the leadership ability of the brigade leader, the brigade's use of turnout gear and fire-fighting equipment, and the effectiveness of the fire brigade's team operation. The inspectors also reviewed whether the licensee's fire brigade met NRC requirements for training, dedicated size and membership, and equipment.

These activities constitute completion of one annual inspection sample as defined in Inspection Procedure 71111.05.

b. Findings

No findings were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

On February 13, 2014, the inspectors completed an inspection of underground bunkers susceptible to flooding. The inspectors selected three underground bunkers that contained risk-significant or multiple-train cables whose failure could disable risk-significant equipment:

- MH-E2B3, Unit 2, service water train B
- MH-E2B4, Unit 2, service water train B
- MH-E2B5, Unit 2, service water train B

The inspectors observed the material condition of the cables and splices contained in the bunkers and looked for evidence of cable degradation due to water intrusion. The inspectors verified that the cables and vaults met design requirements.

These activities constitute completion of one underground bunker/manhole inspection sample as defined in Inspection Procedure 71111.06.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program and Licensed Operator Performance (71111.11)

.1 Review of Licensed Operator Requalification

a. Inspection Scope

On February 10, 2014, the inspectors observed simulator training for an operating crew on mid-loop operations. The inspectors assessed the performance of the operators and the evaluators' critique of their performance. The inspectors also assessed the modeling and performance of the simulator during the scenario. In addition, the inspectors observed classroom training for licensed operators on changes to shutdown margin calculations and fuel movement procedures.

These activities constitute completion of one quarterly licensed operator requalification program sample as defined in Inspection Procedure 71111.11.

b. Findings

No findings were identified.

.2 Review of Licensed Operator Performance

a. Inspection Scope

The inspectors observed the performance of on-shift licensed operators in the plant's main control room. At the time of the observations, the plant was in a period of heightened activity or risk. The inspectors observed the operators' performance of the following activities:

- January 8, 2014, Unit 1, power ascension
- January 18, 2014, Unit 1, automatic reactor trip
- February 4, 2014, Unit 2, turbine runback

In addition, the inspectors assessed the operators' adherence to plant procedures, including the conduct of operations procedure and other operations department policies.

These activities constitute completion of one quarterly licensed operator performance sample as defined in Inspection Procedure 71111.11.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors evaluated the performance and condition of the Unit 2 generator gas cooling system. The inspectors reviewed the extent of condition of possible common cause structure, system, or component failures and evaluated the adequacy of the licensee's corrective actions. The inspectors reviewed the licensee's work practices to evaluate whether these may have played a role in the degradation of the structures, systems, or components. The inspectors assessed the licensee's characterization of the degradation in accordance with 10 CFR 50.65 (the Maintenance Rule) and verified that the licensee was appropriately tracking degraded performance and conditions in accordance with the Maintenance Rule.

These activities constituted completion of one maintenance effectiveness sample as defined in Inspection Procedure 71111.12.

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)

a. Inspection Scope

The inspectors reviewed the licensee's evaluation and management of plant risk for the maintenance and emergent work activities affecting risk-significant and safety-related equipment listed below to verify that the appropriate risk assessments were performed when removing equipment for work:

- January 8, 2014, Unit 1, turbine driven auxiliary feedwater system testing during 345kV switchyard maintenance
- January 13, 2014, Unit 1, maintenance on service water train B
- February 18, 2014, Unit 2, service water cross tie to the auxiliary feedwater system and safety injection pump 2-01
- February 20, 2014, Unit 2, 138kV switchyard maintenance and auxiliary feedwater system testing
- March 25, 2014, Unit 2, refueling outage 2RF14 risk profile

The inspectors verified that these risk assessments were performed timely and in accordance with the requirements of 10 CFR 50.65 (the Maintenance Rule) and plant procedures. The inspectors reviewed the accuracy and completeness of the licensee's risk assessments and verified that the licensee implemented appropriate risk management actions based on the result of the assessments.

These activities constitute completion of five maintenance risk assessments and emergent work control inspection samples as defined in Inspection Procedure 71111.13.

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15)

a. Inspection Scope

The inspectors reviewed the following operability determinations and functionality assessments that the licensee performed for degraded or nonconforming structures, systems, or components:

- Condition Report CR-2013-010348, operability determination of Unit 2, safety injection accumulator 2-03
- Condition Report CR-2013-010561, operability determination of Units 1 and 2, reactor shutdown margin
- Condition Report CR-2014-001867, operability determination of Unit 2, safety injection pump 2-01
- Condition Report CR-2014-002011, operability determination of Unit 1, motor driven auxiliary feedwater pump 1-02

The inspectors reviewed the timeliness and technical adequacy of the licensee's evaluations. Where the licensee determined the degraded structures, systems, or components to be operable or functional, the inspectors verified that the licensee's compensatory measures were appropriate to provide reasonable assurance of operability or functionality. The inspectors verified that the licensee had considered the

effect of other degraded conditions on the operability or functionality of the degraded structures, systems, or components.

These activities constitute completion of four operability determination and functionality assessment inspection samples as defined in Inspection Procedure 71111.15.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18)

a. Inspection Scope

The inspectors reviewed a permanent plant modification associated with the placement of threaded caps on vent, drain, and test connections inside containment. The inspectors reviewed the design and implementation of the modification and specifically Design Change Notice 07064. The inspectors verified that the activities involved in implementing the modification did not adversely impact operator actions that may be required in response to an emergency or other unplanned event.

These activities constitute completion of one permanent modifications sample, as defined in Inspection Procedure 71111.18.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed the following post-maintenance activities that affected risk-significant structures, systems, or components:

- January 13, 2014, Unit 1, service water system testing following vacuum breaker replacement
- February 11, 2014, Unit 2, main steam isolation valve testing following actuator O-ring replacement
- February 18, 2014, Unit 2, safety injection pump testing following rework of oil leaks
- February 27, 2014, Unit 2, motor driven auxiliary feedwater pump testing following circuit breaker secondary stab replacement
- March 4, 2014, Units 1 and 2, low grid voltage relay testing following adjustment

The inspectors reviewed licensing and design basis documents for the structures, systems, or components and the maintenance and post-maintenance test procedures. The inspectors observed the performance of the post-maintenance tests to verify that

the licensee performed the tests in accordance with approved procedures, satisfied the established acceptance criteria, and restored the operability of the affected structures, systems, or components.

These activities constitute completion of five post-maintenance testing samples as defined in Inspection Procedure 71111.19.

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed the following risk-significant surveillance tests and reviewed test results to verify that the tests adequately demonstrated that the structures, systems, and components were capable of performing their safety functions:

Pump or Valve Inservice Test

- February 18, 2014, Unit 2, safety injection pump 2-01 testing in accordance with Procedure OPT-204B, “SI System,” Revision 12

Routine Surveillance Testing

- March 6, 2014, Unit 2, diesel generators 2-01 and 2-02 lube oil inventory verification in accordance with Procedure MSM-P0-3374, “Emergency Diesel Generator Monthly Run Related Inspections,” Revision 3

The inspectors verified that these tests met technical specification requirements, that the licensee performed the tests in accordance with their procedures, and that the results of the test satisfied appropriate acceptance criteria. The inspectors verified that the licensee restored the operability of the affected structures, systems, and components following testing.

These activities constitute completion of two surveillance testing inspection samples (one pump or valve inservice testing sample and one routine surveillance testing sample) as defined in Inspection Procedure 71111.22.

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06)

.1 Emergency Preparedness Drill Observation

a. Inspection Scope

The inspectors observed an emergency preparedness drill on January 15, 2014, to verify the adequacy and capability of the licensee's assessment of drill performance. The inspectors reviewed the drill scenario, observed the drill from the simulator and the technical support center, and attended the post-drill critique. The inspectors verified that the licensee's emergency classifications, off-site notifications, and protective action recommendations were appropriate and timely. The inspectors verified that any emergency preparedness weaknesses were appropriately identified by the licensee in the post-drill critique and entered into the corrective action program for resolution.

These activities constitute completion of one emergency preparedness drill observation sample as defined in Inspection Procedure 71114.06.

b. Findings

No findings were identified.

.2 Drill/Training Evolution Observation

a. Inspection Scope

The inspectors observed an emergency preparedness drill on February 26, 2014, to verify the adequacy and capability of the licensee's assessment of drill performance. The inspectors reviewed the drill scenario, observed the drill from the simulator, technical support center, operations support center, and emergency operations facility, and attended the post-drill critique. The inspectors verified that the licensee's emergency classifications, off-site notifications, and protective action recommendations were appropriate and timely. The inspectors verified that any emergency preparedness weaknesses were appropriately identified by the licensee in the post-drill critique and entered into the corrective action program for resolution.

These activities constitute completion of one drill/training evolution observation sample as defined in Inspection Procedure 71114.06.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, Public Radiation Safety, and Occupational Radiation Safety

4OA1 Performance Indicator Verification (71151)

.1 Unplanned Scrams per 7000 Critical Hours (IE01)

a. Inspection Scope

The inspectors reviewed licensee event reports for the period of January through December 2013 to determine the number of scrams that occurred. The inspectors compared the number of scrams reported in the licensee event reports to the number reported for the performance indicator. Additionally, the inspectors sampled monthly operating logs to verify the number of critical hours during the period. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the data reported.

These activities constituted completion of two unplanned scrams per 7000 critical hours samples, one per unit, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.2 Unplanned Power Changes per 7000 Critical Hours (IE03)

a. Inspection Scope

The inspectors reviewed operating logs and monthly operating reports for the period of January through December 2013 to determine the number of unplanned power changes that occurred. The inspectors compared the number of unplanned power changes documented to the number reported for the performance indicator. Additionally, the inspectors sampled monthly operating logs to verify the number of critical hours during the period. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the data reported.

These activities constituted completion of two unplanned power changes per 7000 critical hours samples, one per unit, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.3 Unplanned Scrams with Complications (IE04)

a. Inspection Scope

The inspectors reviewed the licensee's basis for including or excluding in this performance indicator each scram that occurred between January through December 2013. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the data reported.

These activities constituted completion of two unplanned scrams with complications samples, one per unit, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152)

Routine Review

a. Inspection Scope

Throughout the inspection period, the inspectors performed daily reviews of items entered into the licensee's corrective action program and periodically attended the licensee's condition report screening meetings. The inspectors verified that licensee personnel were identifying problems at an appropriate threshold and entering these problems into the corrective action program for resolution. The inspectors verified that the licensee developed and implemented corrective actions commensurate with the significance of the problems identified. The inspectors also reviewed the licensee's problem identification and resolution activities during the performance of the other inspection activities documented in this report.

b. Findings

No findings were identified.

4OA3 Follow-up of Events and Notices of Enforcement Discretion (71153)

The following activities constitute completion of two follow-up of events and notices of enforcement discretion samples as defined in Inspection Procedure 71153.

.1 (Closed) Licensee Event Report 05000445/2013-001-00, Inoperability of Unit 1 Emergency Air Lock Exterior Door

a. Inspection Scope

The inspectors performed a review of a licensee event report documenting a condition prohibited by technical specifications that was discovered on January 8, 2013, in which the Unit 1 containment emergency air lock was inoperable for greater than its allowed outage time. The inspectors examined associated procedures, work orders, condition

reports, and the licensee's root cause analysis of the event. The enforcement aspects are described below. This licensee event report is closed.

b. Findings

Introduction. The inspectors reviewed a Green self-revealing non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to follow procedure for performing surveillance testing of the containment emergency air locks. As a result, the Unit 1 containment emergency air lock exterior door was inoperable.

Description. On December 22, 2012, the licensee performed a door seal test of the Unit 1 emergency air lock interior and exterior doors using Procedure OPT-804A, "Appendix J Leak Rate Test of Emergency Airlock Door Seals (CP1-MEMEPE-01)," Revision 5, and failed to properly close the exterior door. On January 8, 2013, maintenance personnel entered the Unit 1 containment to perform preventive maintenance on the Unit 1 emergency air lock. When attempting to open the Unit 1 emergency air lock interior door, the personnel observed that the door would not move. The maintenance personnel discovered that the mechanical door position indication for the air lock exterior door indicated the exterior door was not completely cycled. The personnel determined that the interlock was still engaged, preventing both doors from being opened simultaneously. The personnel operated the exterior door's handwheel in the close direction and turned the handwheel approximately 1½ turns to clear the interlock.

On January 10, 2013, operations and engineering personnel entered the Unit 1 containment to recreate the as-found conditions of January 8, 2013, and concluded that the emergency air lock exterior door equalizing valve had been partially opened. The equalizing valve is closed with the door handwheel by a mechanical linkage that begins to close the equalizing valve after the door is closed. With the door closed and the equalizing valve still open, the local mechanical door position indication shows that the closing cycle is not complete; however, the door open alarm in the control room will be cleared. The equalizing valves were initially designed with limit switches to provide electronic position indication to the alarm circuit in the control room, but the licensee disabled those switches during initial construction.

The licensee determined that, based on the Unit 1 emergency air lock exterior door equalizing valve not being closed, the Unit 1 emergency air lock exterior door was inoperable from December 22, 2012, until January 8, 2013, when the maintenance personnel closed the exterior door. The licensee reported this condition as Licensee Event Report 05000445/2013-001, "Inoperability of Unit 1 Emergency Airlock Exterior Door," based on this being a condition prohibited by the plant's technical specifications. The licensee entered this into the corrective action program as Condition Report CR-2013-000264.

The inspectors reviewed the licensee event report, procedures, the licensee's cause evaluation, and visually inspected the exterior door handwheels. Procedure OPT-804A required, in part, to rotate the handwheel approximately 3¾ revolutions to close the outer door. Based on this requirement and the conditions described in the licensee's evaluation, the inspectors concluded that the personnel operating the air lock had failed to follow the procedure. The inspectors determined that the lack of positive verification of closure of the equalizing valves was a significant contributor to this failure. The

licensee revised the procedures for operation and testing of both emergency air locks by adding a step for independent verification of door closure. In addition, the licensee modified the alarm circuit to include the limit switches for the equalizing valves for both the exterior and interior doors. This modification provided the control room with positive verification that the equalizing valves are closed.

Analysis. The licensee's failure to follow procedure for operating the emergency air locks was a performance deficiency. Specifically, personnel failed to fully close the exterior door in accordance with Procedure OPT-804A, resulting in the containment air lock exterior door equalizing valve remaining open following operation of the door. The finding was more than minor because it was associated with the human performance attribute of the Barrier Integrity cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that containment physical design barriers protect the public from radionuclide releases caused by accidents or events. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and Appendix A, Exhibit 3, "Barrier Integrity Screening Questions," the finding was determined to be of very low safety significance (Green) because the finding did not represent an actual open pathway in the physical integrity of reactor containment or containment isolation system, and the licensee does not use hydrogen igniters in the reactor containment. The finding has a human performance cross-cutting aspect associated with resources, in that, the licensee failed to ensure that equipment and procedures were adequate to support nuclear safety [H.1].

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 procedures of a type appropriate to the circumstances and shall be accomplished in accordance with these procedures. Procedure OPT-804A, "Appendix J Leak Rate Test of Emergency Airlock Door Seals (CP1-MEMEPE-01)," Revision 5, step 8.1.S required, in part, to rotate the handwheel approximately 3¾ revolutions to close the outer door. Contrary to the above, on December 22, 2012, licensee personnel performed an activity affecting quality and failed to accomplish the activity in accordance with documented procedures. Specifically, personnel failed to follow Procedure OPT-804A, step 8.1.S, and fully close the exterior door. On January 8, 2013, the licensee properly closed the outer door. Since the violation was of very low safety significance and was documented in the licensee's corrective action program as Condition Report CR-2013-000264, it is being treated as a non-cited violation, consistent with Section 2.3.2.a of the Enforcement Policy: NCV 05000445/2014002-01, "Failure to Follow Procedure for Operation of the Containment Emergency Air Lock Doors."

.2 Unit 1 Automatic Reactor Trip

a. Inspection Scope

On January 18, 2014, Unit 1 experienced an automatic reactor trip as a result of a turbine trip. The current transformer phase A wire shorted through the insulation as a result of a rub condition causing a generator trip and subsequent turbine trip. The inspectors responded to the control room to assess the operators' performance and procedure usage. The inspectors performed a walkdown of the control boards to verify appropriate equipment response following the trip. The inspectors discussed the trip with operations management and the control room staff.

b. Findings

No findings were identified.

4OA6 Meetings

Exit Meeting Summary

On March 26, 2014, the inspectors presented the resident inspection results to Mr. K. Peters, Site Vice President, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors acknowledged review of proprietary material during the inspection. No proprietary information was documented in the report.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

R. Flores, Senior Vice President and Chief Nuclear Officer
S. Bradley, Manager, Radiation Protection
D. Goodwin, Director, Work Management
T. Hope, Manager, Regulatory Affairs
K. Faver, Manager, Emergency Preparedness
F. Madden, Director, External Affairs
B. Mays, Assistant Chief Nuclear Officer
T. McCool, Vice President, Engineering and Support
D. McGaughey, Director, Performance Improvement
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B. Patrick, Director, Maintenance
K. Peters, Site Vice President
B. Reppa, Director, Site Engineering
S. Sewell, Plant Manager
M. Smith, Director, Nuclear Operations

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000445/2014002-01	NCV	Failure to Follow Procedure for Operation of the Containment Emergency Air Lock Doors (Section 4OA3.1)

Closed

05000445/2013-001-00	LER	Inoperability of Unit 1 Emergency Air Lock Exterior Door (Section 4OA3.1)

LIST OF DOCUMENTS REVIEWED

Section 1R04: Equipment Alignment

Procedure

Number	Title	Revision
SOP-304b	Auxiliary Feedwater System	13

Section 1R05: Fire Protection

Calculation

Number	Title	Revision
2-FP-0081	As-Built Combustible Loading Calculation Unit 2 Safeguards Building	11

Condition Report

2013-009084

Drawings

Number	Title	Revision
E2-2021	Safeguard and Diesel Buildings Plan at El 810'-6"	CP-3
E2-2022	Safeguard and Diesel Buildings Fire Detection Plan El 831'-6" and 844'-0"	CP-2
M1-1928	Fire Hazard Analysis – Auxiliary and Electrical Control Bldg. El 807'-0" and El 810'-6"	CP-3
M2-1921	Fire Hazard Analysis - Unit 2 Containment and Safeguards Buildings Plans El 807'-0" and 810'-6"	CP-6
M2-1922	Fire Hazard Analysis – Unit 2 Containment & Safeguard Buildings Floor Plan at El 831'-6", 832-6", and 844'-0"	CP-5

Procedures

Number	Title	Revision
STA-729	Control of Transient Combustibles, Ignition Sources, and Fire Watches	11
STA-724	Fire Reporting and Response	3

Miscellaneous Document

Number	Title	Date
F14-03	Fire Drill - 14-03 U1 1-01 TD AFWP Pump	February 11, 2014

Section 1R06: Flood Protection Measures

Drawing

Number	Title	Revision
2323-E1-1007-01	Yard Electrical Ductbank Manhole & Handhole Plan SH. 2	8

Work Order

4751719

Miscellaneous Document

Number	Title	Date
CPSES-200701065	Comanche Peak Steam Electric Station (CPSES) Docket Nos. 50-445 and 50-446 Response to NRC Generic Letter 2007-01	June 21, 2007

Section 1R11: Licensed Operator Requalification Program and Licensed Operator Performance

Procedures

Number	Title	Revision
ODA-102	Conduct of Operations	27
ODA-301	Operating Logs	15
ABN-104	Residual Heat Removal System Malfunction	9
IPO-010A	Reactor Coolant System Reduced Inventory Operations	18

Miscellaneous Document

Number	Title	Date
LO44.BBS.019	Reduced Inventory Simulator Exercise Guide	January 9, 2014

Section 1R12: Maintenance Effectiveness

Condition Reports

2012-008516 2013-001639 2013-010731

Work Order

4318250

Miscellaneous Document

Number	Title	Revision
DBD-ME-014-06	Generator Gas System	17

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Condition Reports

2013-010309 2014-001264 2014-000428

Procedures

Number	Title	Revision
STI-604.01	Integrated Risk Management	1
STI-604.02	Maintenance Risk Assessment	
STI-604.03	Weekly Surveillances / Work Scheduling	1
STI-600.01	Guarded Equipment Management Program	
OPT-206B	AFW System	21
OPT-530A	AFW Check Valve Reverse Flow Test	4
STA-629	Switchyard Control and Transmission Grid Interface	7

Work Orders

4726670 4725794

Section 1R15: Operability Determinations and Functionality Assessments

Calculations

Number	Title	Revision/Date
CN-TB17-026	Comanche Peak Unit 1 Cycle 17 NDR	0
CN-TC14-037	Comanche Peak Unit 2 Cycle 14 NDR	0
RXE-RP-CP2/1-011	U2C1 Xe/Sm Worth Following 8/27/94 Shutdown	0
RXE-RP-CPX/0-09B	Shutdown Margin with Stuck Rods in High Exposure Fuel	1
WCAP-12472-P-A	BEACON Core Monitoring and Operations Support System	August 1994

Condition Reports

2013-010348	2001-001417	2009-004460	2012-012904	2013-010194
2013-010561	2014-002011			

Drawing

Number	Title	Revision
E1-0053	Motor Driven Aux FW Pump Room Fan 08 Tag CP1-VAAUSE-08 Schematic Diagram	CP-5

Procedures

Number	Title	Revision
NUC-117	Reactivity Projections	8
OPT-301	Reactor Shutdown Margin Verification	12
OPT-301	Reactor Shutdown Margin Verification	11

Section 1R18: Permanent Modifications

Drawings

Number	Title	Revision
M1-200	Mechanical Symbols & Notes	CP-10
M1-200	Mechanical Symbols & Notes	CP-26
M1-0253	Flow Diagram Chemical and Volume Control System	CP-21

Section 1R19: Post-Maintenance Testing

Drawings

Number	Title	Revision
33-51261-E2518	6.9 kV Switchgear - Bus 2EA1 Cub 13 - Breaker 2APMD1 Internal Wiring Diagram	CP-5
BRP-SW-1-AB-010	Station Service Water	CP-3
E2-0031	6.9 kV Switchgear Bus 2EA1 Auxiliary Feedwater Pump 21 Tag CP2-AFAPMD-01 BKR 2APMD1 Schematic Diagram	CP-5
MD22913	Nozzle Check Valve 2”-Class 150, DRV-Z	C

Procedures

Number	Title	Revision
EPG-725	Pressure Testing	11
EPG-725	Pressure Testing	2
EPG-731	ASME Section XI Repair / Replacement Activities	2
INC-2085	Rework and Replacement of I&C Equipment	4
MSE-G0-0020	Relay Calibration	5
MSM-C0-6602	Fisher Diaphragm Actuator Maintenance	4
MSM-C0-7307	Safety Injection Pump Inspection	2
MSM-G0-0203	Flange Alignment and Fastener Torque Data	7
MSM-G0-0206	Vacuum Relief Valve Bench Testing	4
OPT-206B	AFW System	21
OPT-207A	Service Water System	15
OPT-504B	MS Valve Testing	12
SOP-603B	6900 V Switchgear	10

Work Orders

4656773	4596516	4562722	4656771	4656772
4685059	4409308	4725794	4726670	4717586

Section 1R22: Surveillance Testing

Condition Report

2010-003775

Procedure

Number	Title	Revision
SOP-201B	Safety Injection System	9

Work Orders

4754009	4704179	4754580	4756321

Section 1EP6: Drill Evaluation

Condition Reports

2014-002434 2014-002846

Miscellaneous Document

	Title	Date
	Green Team Exercise Final Report	March 18, 2014

Section 4OA1: Performance Indicator Verification

Condition Report

2014-003039

Section 4OA3: Follow-up of Events and Notices of Enforcement Discretion

Condition Reports

2007-001328 2007-001501 2013-000264 2007-001501 2014-001664

Drawing

Number	Title	Revision
M1-0245	Flow Diagram Airlocks	CP-11

Procedures

Number	Title	Revision
OPT-416A	Containment Airlock Interlocks	2
OPT-416A	Containment Airlock Interlocks	1
OPT-416B	Containment Airlock Interlocks	3
OPT-803A	Appendix J Leak Rate Test of Emergency Airlock (CP1-MEMEPE-01)	6
OPT-803B	Appendix J Leak Rate Test of Emergency Airlock (CP2-MEMEPE-01)	6
OPT-804A	Appendix J Leak Rate Test of Emergency Airlock Door Seals (CP1-MEMEPE-01)	6
OPT-804A	Appendix J Leak Rate Test of Emergency Airlock Door Seals (CP1-MEMEPE-01)	5
OPT-804A	Appendix J Leak Rate Test of Emergency Airlock Door Seals (CP1-MEMEPE-01)	3

Procedures

Number	Title	Revision
OPT-804B	Appendix J Leak Rate Test of Emergency Airlock Door Seals (CP2-MEMEPE-01)	7
OPT-416A	Containment Airlock Interlocks	1
OPT-416A	Containment Airlock Interlocks	2
OPT-416B	Containment Airlock Interlocks	3
SOP-907A	Containment Personnel Airlocks	10
SOP-907A	Containment Personnel Airlocks	15
SOP-907B	Containment Personnel Airlocks	10

Work Orders

4726670	4595833	4595837

Miscellaneous Document

Number	Title	Revision
VDRT-3435937	2 Foot 6 Inch Diameter Escape Lock Hand Wheel Shaft Seal Housing Assembly	0