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

February 3, 2015

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 05000445/2014005 and 05000446/2014005

Dear Mr. Flores:

On December 31, 2014, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Comanche Peak Nuclear Power Plant, Units 1 and 2. On January 7, 2015, 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 two findings of very low safety significance (Green) in this report. One of these findings 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 NRC Enforcement Policy.

If you contest the violation or significance of the 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 or a finding not associated with a regulatory requirement in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the 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* (10 CFR) 2.390, “Public Inspections, Exemptions, Requests for Withholding,” 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 and 50-446
License Nos: NPF-87 and NPF-89

Enclosure:
Inspection Report 05000445/2014005 and 05000446/2014005
w/ Attachment:
1. Supplemental Information
2. Request for Information - Inservice Inspection
3. Request for Information - Radiation Safety Inspection

cc w/ encl: Electronic Distribution

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Electronic Distribution for Comanche Peak Nuclear Power Plant

ADAMS ACCESSION NUMBER: ML15035A636

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OFFICIAL RECORD

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket:	05000445, 05000446
License:	NPF-87, NPF-89
Report:	05000445/2014005 and 05000446/2014005
Licensee:	Luminant Generation Company LLC
Facility:	Comanche Peak Nuclear Power Plant, Units 1 and 2
Location:	6322 N. FM-56, Glen Rose, Texas
Dates:	September 27 through December 31, 2014
Inspectors:	J. Kramer, Senior Resident Inspector R. Kumana, Resident Inspector B. Travis, General Engineer B. Tindell, Senior Resident Inspector N. Hernandez, Resident Inspector R. Williams, Senior Reactor Inspector, NRC Region II L. Carson II, Senior Health Physicist C. Alldredge, Health Physicist N. Greene, PhD, Health Physicist P. Hernandez, Health Physicist
Approved By:	Wayne Walker Chief, Project Branch A Division of Reactor Projects

SUMMARY

IR 05000445/2014005, 05000446/2014005; 09/27/2014 - 12/31/2014; 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 September 27, 2014, and December 31, 2014, by the resident inspectors at the Comanche Peak Nuclear Power Plant and inspectors from the NRC's Region IV office and other NRC offices. Two findings of very low safety significance (Green) are documented in this report. One of these findings 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: Initiating Events

- Green. The inspectors reviewed a self-revealing finding for the licensee's failure to follow the troubleshooting activities procedure while working on the condensate system alarm and control circuit. The troubleshooting activities caused the condensate low pressure heater bypass valve to open resulting in a plant transient. Operators responded to the event by manually initiating a turbine runback and then stabilized the plant. The workers had conducted additional troubleshooting activities without the awareness of operations and an evaluation by engineering, which did not meet the requirements of the troubleshooting procedure. The licensee entered the finding into the corrective action program as Condition Report CR-2014-001268.

  The failure to follow the troubleshooting activities procedure was a performance deficiency. The performance deficiency was more than minor because was associated with the human performance attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during power operations. Specifically, performing the additional troubleshooting steps without the required evaluation and notification resulted in a plant transient. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and Appendix A, Exhibit 1, "Initiating Events Screening Questions," the finding was determined to be of very low safety significance (Green) because the finding did not cause a reactor trip or the loss of mitigation equipment. The finding has a human performance cross-cutting aspect associated with documentation because the licensee failed to ensure that work packages were complete and thorough and that plant activities were governed by high-quality procedures [H.7]. (Section 4OA3.2)

Cornerstone: Mitigating Systems

- 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 instructions when performing surveillance testing of the reactor coolant loop cold leg injection boundary valves. The test procedure had a prerequisite for the plant to be in mode 4 or 5. The licensee performed the test in mode 3 which isolated the residual heat removal

system flow to loops 3 and 4 and aligned the loop 3 safety injection accumulator to the test line. As a result, both trains of residual heat removal and one safety injection accumulator were inoperable. The licensee revised the procedure for the plant conditions and re-performed the test. The licensee entered the finding into the corrective action program as Condition Report CR-2014-005254.

The licensee's failure to follow procedure for performing surveillance testing of the reactor coolant loop cold leg injection boundary valves was a performance deficiency. Specifically, personnel failed to ensure prerequisites were met in accordance with the procedure. The finding was more than minor because it was associated with the human performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability and reliability of systems that respond to initiating events to prevent undesirable consequences. The performance deficiency resulted in both trains of the residual heat removal system and one safety injection accumulator being inoperable. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," the finding was determined to require a detailed risk evaluation because the finding represented a loss of function for the residual heat removal system. A senior reactor analyst performed a bounding detailed risk evaluation and determined the finding to be of very low safety significance (Green). The finding has a human performance cross-cutting aspect associated with challenging the unknown because the licensee failed to stop when faced with uncertain conditions and evaluate risks before proceeding [H.11]. (Section 4OA3.1)

PLANT STATUS

Unit 1 began the inspection period at approximately 100 percent power. On October 4, 2014, the operators shut down Unit 1 to begin a scheduled refueling outage. On November 27, 2014, the outage ended when the main generator output breakers were closed and Unit 1 was placed on the grid. On November 30, 2014, the unit returned to approximately 100 percent power 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 December 2, 2014, operators reduced reactor power to approximately 70 percent power for turbine valve testing. The unit returned to approximately 100 percent power the same day and operated at that power level for the remainder of the inspection period.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

Readiness for Seasonal Extreme Weather Conditions

a. Inspection Scope

On November 13, 2014, the inspectors completed an inspection of the station's readiness for seasonal extreme weather conditions. The inspectors reviewed the licensee's adverse weather procedures for cold weather and evaluated the licensee's implementation of these procedures. The inspectors verified that, prior to the onset of extreme low temperatures, the licensee had corrected weather-related equipment deficiencies identified during the previous cold weather season.

The inspectors selected three risk-significant systems that were required to be protected from cold weather:

- Diesel generators
- 480 volt AC power
- Condensate storage tank

The inspectors reviewed the licensee's procedures and design information to ensure the systems or components would remain functional when challenged by adverse weather. The inspectors verified that operator actions described in the licensee's procedures were adequate to maintain readiness of these systems. The inspectors performed a walkdown of portions of these systems to verify the physical condition of the adverse weather protection features.

These activities constituted one sample of readiness for seasonal adverse weather as defined in Inspection Procedure 71111.01.

b. Findings

No findings were identified.

1R04 Equipment Alignment (71111.04)

.1 Partial Walkdown

a. Inspection Scope

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

- November 13, 2014, Unit 2, motor driven auxiliary feedwater 2-01 and turbine driven auxiliary feedwater when motor driven auxiliary feedwater 2-02 was unavailable
- December 31, 2014, Unit 2, diesel generator 2-02 and safety-related train B 6.9 kV bus when diesel generator 2-01 was unavailable

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 two partial system walkdown samples as defined in Inspection Procedure 71111.04.

b. Findings

No findings were identified.

.2 Complete Walkdown

a. Inspection Scope

On December 20, 2014, the inspectors performed a complete system walkdown of the Unit 2 containment spray system. The inspectors reviewed the licensee's procedures and system design information to determine the correct system lineup for the existing plant configuration. The inspectors also reviewed outstanding work orders, open condition reports, in-process design changes, temporary modifications, and other open items tracked by the licensee's operations and engineering departments. The inspectors verified that the system was correctly aligned for the existing plant configuration.

These activities constituted one complete system walkdown sample as defined in Inspection Procedure 71111.04.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

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:

- October 22, 2014, Units 1 and 2, fire water pump house
- October 29, 2014, Units 1 and 2, fire zone AA21f, auxiliary building 790 foot elevation
- October 29, 2014, Units 1 and 2, fire zone AA21d, auxiliary building 830 foot elevation
- October 30, 2014, Units 1 and 2, fire zone EA43, electrical and control building 778 foot elevation
- October 30, 2014, Unit 1, fire zone 1SB5, auxiliary feedwater pump 1-01 room

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 five quarterly fire protection samples as defined in Inspection Procedure 71111.05.

b. Findings

No findings were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

On November 13, 2014, the inspectors completed an inspection of the station's ability to mitigate flooding due to internal causes. After reviewing the licensee's flooding analysis, the inspectors chose two plant areas containing risk-significant structures, systems, and components that were susceptible to flooding:

- Unit 2 cable spreading room
- Unit 2 train B switchgear room

The inspectors reviewed plant design features and licensee procedures for coping with internal flooding. The inspectors performed a walkdown of the selected areas to inspect the design features, including the material condition of seals, drains, and flood barriers. The inspectors evaluated whether operator actions credited for flood mitigation could be successfully accomplished.

These activities constitute completion of one flood protection measures sample as defined in Inspection Procedure 71111.06.

b. Findings

No findings were identified.

1R08 Inservice Inspection Activities (71111.08)

The activities described in subsections .1 through .4 below constitute completion of one inservice inspection activities sample as defined in Inspection Procedure 71111.08.

.1 Nondestructive Examination Activities and Welding Activities

a. Inspection Scope

The inspectors directly observed the following nondestructive examinations:

SYSTEM	COMPONENT IDENTIFICATION	EXAMINATION TYPE
Reactor Coolant System	12.75-inch Pipe to elbow weld area TBX-1-4101-MRP	Ultrasonic Test
Reactor Coolant System	ASME Class 1 attachment welds TBX-1-4102-H3	Dye Penetrant Test
Reactor Coolant System	Reactor Vessel Closure Head Penetrations	Visual Test (General Visual)
Containment	Containment Liner in Elevator Shaft	Visual Test (General Visual)
Containment	Containment Moisture Barrier-Seismic Gap Material	Visual Test (General Visual)

The inspectors reviewed records for the following nondestructive examinations:

SYSTEM	COMPONENT IDENTIFICATION	EXAMINATION TYPE
Reactor Coolant System	6.625-inch Elbow to pipe weld TBX-2-2402-23	Ultrasonic Test
Reactor Coolant System	6.625-inch Pipe to elbow weld TBX-2-2402-24	Ultrasonic Test
Reactor Coolant System	6.625-inch Elbow to pipe weld TBX-2-2402-25	Ultrasonic Test
Reactor Coolant System	18-inch Reducing elbow to pipe weld TBX-2-2401-2NW	Ultrasonic Test

SYSTEM	COMPONENT IDENTIFICATION	EXAMINATION TYPE
Reactor Coolant System	ASME Class 2 attachment welds TBX-2-2401-H2	Magnetic Particle Test
Reactor Coolant System	ASME Class 2 attachment welds TBX-2-2401-H6	Magnetic Particle Test
Chemical Volume Control	3-inch Pipe to valve weld TUX 21-1	Radiograph Test
Chemical Volume Control	3-inch Pipe to valve weld TUX 22-1	Radiograph Test
Chemical Volume Control	3-inch Pipe to valve weld TUX 23-1	Radiograph Test
Reactor Coolant System	Reactor Vessel Lower Head Bottom Mounted Instrument Penetrations	Visual Test (General Visual)

During the review and observation of each examination, the inspectors observed whether activities were performed in accordance with the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code requirements and applicable procedures. The inspectors also reviewed the qualifications of all nondestructive examination technicians performing the inspections to determine whether they were current.

The inspectors observed a portion of the following welding activities:

SYSTEM	WELD IDENTIFICATION	WELD TYPE
Auxiliary Feed Water System	System tie-in for AFW primary FLEX connection valve 1-0272	Gas Tungsten/ Shield Metal Arc Welding
Auxiliary Feed Water System	System tie-in for AFW primary FLEX connection valve 1-0273	Gas Tungsten/ Shield Metal Arc Welding

The inspectors reviewed records for the following welding activities:

SYSTEM	WELD IDENTIFICATION	WELD TYPE
Safety Injection System	Safety Injection Pump 1-01 Lube Oil Cooler Basket Strainer	Gas Tungsten Arc Welding
Reactor Coolant System	MOV 1-HV-8402A	Gas Tungsten Arc Welding

The inspectors reviewed whether the welding procedure specifications and the welders had been properly qualified in accordance with ASME Code, Section IX requirements. The inspectors also determined whether that essential variables were identified,

recorded in the procedure qualification record, and formed the bases for qualification of the welding procedure specifications.

b. Findings

No findings identified.

.2 Vessel Upper Head Penetration Inspection Activities

a. Inspection Scope

The licensee performed a visual inspection per procedure, "Reactor Vessel Closure Head Visual Examination Plan," Revision 4. During refueling outages when a bare metal visual inspection is not required per ASME Code Case N-729-1, a less detailed general visual assessment is performed. The inspectors reviewed the results of the licensee's visual assessment and verified that there was no evidence of boric acid challenging the structural integrity of the reactor vessel upper head components and attachments.

b. Findings

No findings were identified.

.3 Boric Acid Corrosion Control Inspection Activities

a. Inspection Scope

The inspectors reviewed the licensee's implementation of its boric acid corrosion control program for monitoring degradation of those systems that could be adversely affected by boric acid corrosion. The inspectors reviewed the documentation associated with the licensee's boric acid corrosion control walkdown as specified in procedure STA-737, "Boric Acid Detection and Evaluation," Revision 8. The inspectors reviewed whether the visual inspections emphasized locations where boric acid leaks could cause degradation of safety significant components, and whether engineering evaluation used corrosion rates applicable to the affected components and properly assessed the effects of corrosion induced wastage on structural or pressure boundary integrity. The inspectors observed whether corrective actions taken were consistent with the ASME Code, and 10 CFR 50, Appendix B requirements.

b. Findings

No findings were identified.

.4 Steam Generator Tube Inspection Activities

a. Inspection Scope

The licensee did not perform steam generator tube inspection activities during Refueling Outage 1R17. The next steam generator tube inspection will take place during Refueling Outage 1R19.

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 December 1, 2014, the inspectors observed simulator training for an operating crew. 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 training activity.

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. In addition, the inspectors assessed the operators' adherence to plant procedures, including the conduct of operations procedure and other operations department policies. The inspectors observed the operators' performance of the following activities:

- October 4, 2014, Unit 1, manual reactor trip and emergency response guideline usage at the start of refueling outage 1RF17
- October 28, 2014, Unit 1, reactor coolant system drain to reduced inventory and mid-loop conditions
- November 25, 2014, Unit 1, reactor startup from refueling outage 1RF17

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 degraded performance or condition of the following risk-significant structures, systems, or components:

- Unit 2 diesel generators
- Unit 1 main steam isolation valves
- Main feedwater system
- Service water cross-connect valves

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.

The inspectors reviewed Operating Experience Smart Sample (OpESS) FY 2010-01 "Recent Inspection Experience for Components Installed Beyond Vendor Recommended Service Life" for the review of the service water cross-connect valves.

These activities constituted completion of four maintenance effectiveness samples 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 following risk assessments performed by the licensee prior to changes in plant configuration and the risk management actions taken by the licensee in response to elevated risk:

- October 9, 2014, both units, risk management of alternate spent fuel pool cooling alignment

- October 28, 2014, Unit 1, outage risk management and management of orange risk during mid-loop operations

- December 13, 2014, Unit 1, remote shutdown panel testing associated with diesel generator 1-02 and the train B 6.9 kV switchgear supply breakers

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 three 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-2014-007235, Unit 2, supplying component cooling water to spent fuel pool heat exchanger X-01 from Unit 2
- Condition Report CR-2014-011528, Unit 1, automatic start of diesel fire pump X-06
- Condition Report CR-2014-012107, Unit 1, gas voiding of emergency core cooling systems from refueling water storage tank
- Condition Report CR-2014-012526, Unit 1, air leak from diesel generator 1-02 lower plenum
- Condition Report CR-2014-013003, Unit 2, leakage past pressurizer spray valve 1-PCV-455C

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 five 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 the permanent plant modification that affected risk-significant structures, systems, and components associated with the Unit 1 diverse and flexible mitigation capability (FLEX) equipment. The inspectors reviewed Final Design Authorization FDA-2013-000008-05-02. The inspectors performed a walkdown of the modifications. The inspectors verified that work activities involved in implementing the modifications 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 sample of permanent modifications inspection samples 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:

- October 5, 2014, Unit 1, containment polar crane testing following relay panel replacement prior to reactor vessel head and reactor coolant pump motor lifts
- October 10, 2014, Unit 1, centrifugal charging pump 1-01 testing following maintenance
- October 30, 2014, Unit 1, diesel generator 1-02 testing following outage maintenance and replacement of governor drive coupling element
- November 1, 2014, Unit 1, alternate power diesel generator testing to confirm functionality of the diesel generators and components following installation
- November 7, 2014, Unit 1, digital rod position indication testing following replacement of a digital rod position indication coil
- November 7, 2014, Unit 1, turbine driven auxiliary feedwater pump over-speed testing following maintenance
- December 15, 2014, Unit 1, remote shutdown panel testing following replacement of a power supply

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.

The inspectors reviewed Operating Experience Smart Sample (OpESS) FY2008-01, "Negative Trend and Recurring Events Involving Emergency Diesel Generators" in the review of diesel generator testing.

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

b. Findings

No findings were identified.

1R20 Refueling and Other Outage Activities (71111.20)

a. Inspection Scope

During the station's refueling outage that concluded on November 27, 2014, the inspectors evaluated the licensee's outage activities. The inspectors verified that the licensee considered risk in developing and implementing the outage plan, appropriately managed personnel fatigue, and developed mitigation strategies for losses of key safety functions. This verification included the following:

- Review of the licensee's outage plan prior to the outage
- Monitoring of shut-down and cool-down activities
- Verification that the licensee maintained defense-in-depth during outage activities
- Observation and review of reduced-inventory and mid-loop activities
- Observation and review of fuel handling activities
- Monitoring of heat-up and startup activities

These activities constitute completion of one refueling outage sample as defined in Inspection Procedure 71111.20.

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:

- April 21, 2014, Unit 2, power operated relief valve testing in accordance with Procedure OPT-606B, "PORV N2 Accumulator Check Valve Leak Test," Revision 7

- October 24, 2014, Unit 1, surveillances required for entry into Mode 6 in accordance with technical specifications and Procedure RFO-102, “Refueling Operation,” Revision 13

- October 27, 2014, Unit 1, containment emergency core cooling system sump inspection in accordance with procedure OPT-306, “Containment Sump Inspection,” Revision 7

- November 18, 2014, Unit 2, reactor coolant pump component cooling water check valve testing in accordance with Procedure OPT-501B, “CCW Valves,” Revision 10.

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 four surveillance testing inspection samples as defined in Inspection Procedure 71111.22.

b. Findings

No findings were identified

2. RADIATION SAFETY

Cornerstones: Public Radiation Safety and Occupational Radiation Safety

2RS5 Radiation Monitoring Instrumentation (71124.05)

a. Inspection Scope

The inspectors evaluated the accuracy and operability of the radiation monitoring equipment used by the licensee (1) to monitor areas, materials, and workers to ensure a radiologically safe work environment, and (2) to detect and quantify radioactive process streams and effluent releases. The inspectors interviewed licensee personnel, walked down various portions of the plant, and reviewed licensee performance in the following areas:

- Selected plant configurations and alignments of process, postaccident, and effluent monitors with descriptions in the Final Safety Analysis Report and the offsite dose calculation manual

- Selected instrumentation, including effluent monitoring instrument, portable survey instruments, area radiation monitors, continuous air monitors, personnel contamination monitors, portal monitors, and small article monitors to examine their configurations and source checks

- Calibration and testing of process and effluent monitors, laboratory instrumentation, whole body counters, postaccident monitoring instrumentation, portal monitors, personnel contamination monitors, small article monitors, portable survey instruments, area radiation monitors, electronic dosimetry, air samplers, and continuous air monitors

- Audits, self-assessments, and corrective action documents related to radiation monitoring instrumentation since the last inspection

These activities constitute completion of one sample of radiation monitoring instrumentation as defined in Inspection Procedure 71124.05.

b. Findings

No findings were identified.

2RS6 Radioactive Gaseous and Liquid Effluent Treatment (71124.06)

a. Inspection Scope

The inspectors evaluated whether the licensee maintained gaseous and liquid effluent processing systems and properly mitigated, monitored, and evaluated radiological discharges with respect to public exposure. The inspectors verified that abnormal radioactive gaseous or liquid discharges and conditions, when effluent radiation monitors are out-of-service, were controlled in accordance with the applicable regulatory requirements and licensee procedures. The inspectors verified that the licensee's quality control program ensured radioactive effluent sampling and analysis adequately quantified and evaluated discharges of radioactive materials. The inspectors verified the adequacy of public dose projections resulting from radioactive effluent discharges. The inspectors interviewed licensee personnel and reviewed or observed the following items:

- Radiological effluent release reports since the previous inspection and reports related to the effluent program issued since the previous inspection

- Effluent program implementing procedures, including sampling, monitor setpoint determinations and dose calculations

- Equipment configuration and flow paths of selected gaseous and liquid discharge system components, filtered ventilation system material condition, and significant changes to their effluent release points, if any, and associated 10 CFR 50.59 reviews

- Selected portions of the routine processing and discharge of radioactive gaseous and liquid effluents including sample collection and analysis

- Controls used to ensure representative sampling and appropriate compensatory sampling

- Results of the inter-laboratory comparison program

- Effluent stack flow rates
- Surveillance test results of technical specification-required ventilation effluent discharge systems since the previous inspection
- Significant changes in reported dose values
- A selection of radioactive liquid and gaseous waste discharge permits
- Part 61 analyses and methods used to determine which isotopes are included in the source term
- Offsite dose calculation manual changes
- Meteorological dispersion and deposition factors
- Latest land use census
- Records of abnormal gaseous or liquid tank discharges
- Groundwater monitoring results
- Changes to the licensee's written program for identifying and controlling contaminated spills/leaks to groundwater
- Identified leakage or spill events and entries made into 10 CFR 50.75(g) records, if any, and associated evaluations of the extent of the contamination and the radiological source term
- Offsite notifications and reports of events associated with spills, leaks, and groundwater monitoring results
- Audits, self-assessments, reports, and corrective action documents related to radioactive gaseous and liquid effluent treatment since the last inspection

These activities constitute completion of one sample of radioactive gaseous and liquid effluent treatment, as defined in Inspection Procedure 71124.06.

b. Findings

No findings were identified.

2RS7 Radiological Environmental Monitoring Program (71124.07)

a. Inspection Scope

The inspectors evaluated whether the licensee's radiological environmental monitoring program quantified the impact of radioactive effluent releases to the environment and sufficiently validated the integrity of the radioactive gaseous and liquid effluent release program. The inspectors verified that the radiological environmental monitoring program

was implemented consistent with the licensee's technical specifications and offsite dose calculation manual, and that the radioactive effluent release program met the design objective in Appendix I to 10 CFR Part 50. The inspectors verified that the licensee's radiological environmental monitoring program monitored non-effluent exposure pathways, was based on sound principles and assumptions, and validated that doses to members of the public were within regulatory dose limits. The inspectors reviewed or observed the following items:

- Annual environmental monitoring reports and offsite dose calculation manual
- Selected air sampling and dosimeter monitoring stations
- Collection and preparation of environmental samples
- Operability, calibration, and maintenance of meteorological instruments
- Selected events documented in the annual environmental monitoring report which involved a missed sample, inoperable sampler, lost dosimeter, or anomalous measurement
- Selected structures, systems, or components that may contain licensed material and has a credible mechanism for licensed material to reach ground water
- Records required by 10 CFR 50.75(g)
- Significant changes made by the licensee to the offsite dose calculation manual as the result of changes to the land census or sampler station modifications since the last inspection
- Calibration and maintenance records for selected air samplers, composite water samplers, and environmental sample radiation measurement instrumentation
- Inter-laboratory comparison program results
- Audits, self-assessments, reports, and corrective action documents related to the radiological environmental monitoring program since the last inspection

These activities constitute completion of one sample of radiological environmental monitoring program as defined in Inspection Procedure 71124.07.

b. Findings

No findings were identified.

2RS8 Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation (71124.08)

a. Inspection Scope

The inspectors evaluated the effectiveness of the licensee's programs for processing, handling, storage, and transportation of radioactive material. The inspectors interviewed licensee personnel and reviewed the following items:

- The solid radioactive waste system description, process control program, and the scope of the licensee's audit program
- Control of radioactive waste storage areas including container labeling/marking and monitoring containers for deformation or signs of waste decomposition
- Changes to the liquid and solid waste processing system configuration including a review of waste processing equipment that is not operational or abandoned in place
- Radio-chemical sample analysis results for radioactive waste streams and use of scaling factors and calculations to account for difficult-to-measure radionuclides
- Processes for waste classification including use of scaling factors and 10 CFR Part 61 analyses
- Shipment packaging, surveying, labeling, marking, placarding, vehicle checking, driver instructing, and preparation of the disposal manifest
- Audits, self-assessments, reports, and corrective action reports radioactive solid waste processing, and radioactive material handling, storage, and transportation performed since the last inspection

These activities constitute completion of one sample of radioactive solid waste processing and radioactive material handling, storage, and transportation as defined in Inspection Procedure 71124.08.

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 Mitigating Systems Performance Index: Residual Heat Removal Systems (MS09)

a. Inspection Scope

The inspectors reviewed the licensee's mitigating system performance index data for the period of October 2013 through September 2014 to verify the accuracy and completeness of the reported data. 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 reported data.

These activities constituted completion of two mitigating system performance index for residual heat removal systems performance indicator samples, one per unit, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.2 Mitigating Systems Performance Index: Cooling Water Support Systems (MS10)

a. Inspection Scope

The inspectors reviewed the licensee's mitigating system performance index data for the period of October 2013 through September 2014 to verify the accuracy and completeness of the reported data. 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 reported data.

These activities constituted completion of two mitigating system performance index for cooling water support systems performance indicator samples, one per unit, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152)

.1 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.

.2 Semiannual Trend Review

a. Inspection Scope

The inspectors performed a trend review of work instruction quality. The inspectors reviewed the licensee's corrective action program, performance indicators, system health reports, external audits, and other documentation to identify trends that might indicate the existence of a more significant safety issue. The inspectors verified that the licensee was taking corrective actions to address identified adverse trends.

These activities constitute completion of one semiannual trend review sample as defined in Inspection Procedure 71152.

b. Observations and Assessments

The inspectors noted several recent examples of issues where work instruction quality was a contributing factor. The inspectors also observed examples from baseline inspection samples where work instruction quality did not meet licensee standards. The inspectors determined that the licensee had programs and actions in place to address these issues. The inspectors shared these observations with licensee management. Specific examples are:

- Condition Report CR-2014-003017, work orders for adjusting the position indicators on containment emergency airlock doors

- Condition Report CR-2015-000135, work orders for replacement of secondary stabs on safety-related circuit breakers

- Condition Report CR-2013-012287, Finding FIN 05000445/2014003-08; 05000446/2014003-08 documented a failure to follow procedure to generate

adequate work instructions for modifications to the 138kV startup transformer XST1

- Condition Report CR-2014-001268, Finding FIN 05000446/2014005-02 documented a failure to follow procedure with a contributing factor of inadequate work instructions for troubleshooting a condensate system alarm (Section 4OA3.1)

c. Findings

No findings were identified.

.3 Annual Follow-up of Selected Issues

a. Inspection Scope

The inspectors performed an in-depth follow-up of the containment emergency airlock doors. On March 18, 2014, the inspectors identified that the exterior position indicator for handwheel number 1 of the Unit 1 emergency airlock did not indicate closed. The licensee verified that the door was closed and the indicator had been misaligned. On April 14, 2014, the inspectors identified that the Unit 2 emergency airlock interior door was open. At the time, the unit was shutdown. The licensee closed the airlock door. The inspectors assessed the licensee's problem identification threshold, cause analyses, extent of condition reviews, and compensatory actions. The inspectors verified that the licensee appropriately prioritized the planned corrective actions and that these actions were adequate to correct the condition.

These activities constitute completion of one annual follow-up of selected issues sample as defined in Inspection Procedure 71152.

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 05000446/2014-002-00, Both Trains of Residual Heat Removal Inoperable During Testing in Mode 3

a. Inspection Scope

The inspectors reviewed a licensee event report documenting a condition that occurred on April 25, 2014, where both trains of residual heat removal were inoperable in mode 3. The inspectors examined associated procedures, work orders, condition reports, and the licensee's root cause analysis of the event.

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 instructions when performing surveillance testing of the reactor coolant loop cold leg injection boundary valves. The test procedure had a prerequisite for the plant to be in mode 4 or 5. The licensee performed the test in mode 3 which isolated the residual heat removal system flow to loops 3 and 4 and aligned the loop 3 safety injection accumulator to the test line. As a result, both trains of residual heat removal and one safety injection accumulator were inoperable. The licensee revised the procedure for the plant conditions and re-performed the test.

Description. On April 22, 2014, the licensee performed a leak test of the reactor coolant loop cold leg injection check valves in Unit 2. The licensee used four procedures, one for each loop, that each tested four individual check valves. The valves were not required to be operable until the reactor was in mode 2. Each procedure had a note stating that the testing of the residual heat removal to cold leg injection check valve and the safety injection accumulator downstream injection check valve "cannot be performed in mode 3 due to the required test lineup." Each procedure also stated in the prerequisites that the plant was required to be in mode 4 or 5 when testing those two valves.

With the plant in mode 4, the licensee successfully performed testing of the four check valves in reactor coolant loops 1 and 2. During the performance of Procedure OPT-615B, "RCS Pressure Boundary Leakage Test for Loop 3 CL Injection Valves," Revision 2, the licensee determined that the test of the safety injection accumulator downstream injection check valve could not be performed at the current system pressure due to higher than normal seat leakage. The licensee decided to postpone testing until it could be performed at a higher pressure. Testing was allowed to be performed at a higher pressure as long as the plant remained in mode 4.

On April 25, 2014, the licensee entered mode 3 and increased pressure to approximately 1800 pounds. The licensee attempted to perform the remaining testing with the prerequisites no longer being met. The licensee closed the residual heat removal to cold leg 3 and 4 injection isolation valve in accordance with step 8.4.3. With this valve closed, both trains of residual heat removal were inoperable. The licensee then opened the residual heat removal to cold leg 2-03 test valve in accordance with step 8.4.5. Opening this valve provided a path from the accumulator to the safety injection test line which began draining the accumulator because the unit was in mode 3 and the safety injection accumulators were lined up to discharge to the reactor coolant loops. The control room received the accumulator 3 low level alarm and took action to stop the accumulator discharge. The licensee restored the systems to their normal lineup and refilled the accumulator. The licensee determined that safety injection accumulator 3 was inoperable for 56 minutes and both trains of residual heat removal were inoperable for 31 minutes.

The licensee entered this issue into their corrective action program as CR-2014-005254 and performed a root cause evaluation. The licensee determined that operators had concerns about the test lineup, but those concerns were not addressed before proceeding with the test. The inspectors reviewed the event logs, procedures, and the

licensee's evaluation. The inspectors determined that the evaluation identified the cause and appropriate corrective actions.

Analysis. The licensee's failure to follow procedure for performing surveillance testing of the reactor coolant loop cold leg injection boundary valves was a performance deficiency. Specifically, personnel failed to ensure prerequisites were met in accordance with the procedure. The finding was more than minor because it was associated with the human performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability and reliability of systems that respond to initiating events to prevent undesirable consequences. The performance deficiency resulted in both trains of the residual heat removal system and one safety injection accumulator being inoperable. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," the finding was determined to require a detailed risk evaluation because the finding represented a loss of function for the residual heat removal system.

A senior reactor analyst performed a bounding detailed risk evaluation. The dominant sequence was a medium-break loss-of-coolant-accident, with an exposure time of approximately one hour, resulting in an incremental conditional core damage probability of 7.75×10^{-8}. Because the incremental conditional core damage probability was determined to be less than 1×10^{-6}, the risk was of very low significance (Green).

The finding has a human performance cross-cutting aspect associated with challenging the unknown, in that, the licensee failed to stop when faced with uncertain conditions, and evaluate risks before proceeding [H.11].

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 a type appropriate to the circumstances and shall be accomplished in accordance with these instructions. Contrary to the above, on April 25, 2014, the licensee performed an activity affecting quality and failed to accomplish the activity in accordance with documented instructions. Specifically, personnel failed to establish prerequisites for testing in accordance with licensee procedure OPT-615B, "RCS Pressure Boundary Leakage Test for Loop 3 CL Injection Valves," Revision 2, step 6.3. The licensee took immediate action to restore the affected systems. Since the violation was of very low safety significance and was documented in the licensee's corrective action program as Condition Report CR-2014-005254, it is being treated as a non-cited violation, consistent with Section 2.3.2.a of the Enforcement Policy: NCV 05000446/2014005-01, "Failure to Follow Procedure for Boundary Valve Leakage Testing."

.2 Failure to Follow the Troubleshooting Activities Procedure Results in a Plant Transient

a. Inspection Scope

On February 4, 2014, operators initiated a manual runback of the turbine to 900 MW due to the low pressure heater bypass valve 2-PV-2286 opening while at full power. Licensee personnel had been troubleshooting intermittent alarms associated with the valve. During troubleshooting, technicians were removing a tool from a terminal when it created a short and caused the valve to open. The inspectors examined associated

procedures, work orders, condition reports, and the licensee's root cause analysis of the event.

b. Findings

Introduction. The inspectors reviewed a Green self-revealing finding for the licensee's failure to follow the troubleshooting activities procedure while working on the condensate system alarm and control circuit. The troubleshooting activities caused the condensate low pressure heater bypass valve to open resulting in a plant transient. Operators responded to the event by manually initiating a turbine runback and then stabilized the plant. The workers had conducted additional troubleshooting activities without the awareness of operations and an evaluation by engineering, which did not meet the requirements of the troubleshooting procedure.

Description. In January 2014, the condensate low pressure heater bypass trouble alarm began intermittently actuating and clearing. The licensee determined that the alarms were not valid and began efforts to troubleshoot the alarm circuit. On January 31, 2014, maintenance personnel connected electrical test equipment to the alarm circuit. This equipment remained in place for several days and was removed on February 3, 2014, after the licensee determined the problem was not in the alarm circuit. On February 4, 2014, maintenance personnel performed troubleshooting of the low pressure heater bypass alarm pressure switches.

The workers identified a problem with one of the switches and decided to continue troubleshooting on the switch. The workers initially planned to lift leads, but after examining the switch, attempted to test voltages within the switch using another tool. Upon removing the tool, the workers inadvertently shorted the control circuitry, resulting in a blown control power fuse. This caused the low pressure heater bypass valve to fail open. In response to the valve opening, operators initiated a manual runback of the turbine from 100 percent power to approximately 70 percent power and stabilized the plant.

The licensee entered the issue into the corrective action program as Condition Report CR-2014-001268 and performed a root cause evaluation for this event. Procedure MDA-111, "Maintenance Department Troubleshooting Activities, Revision 4, section 6.6 contains specific requirements for "extended troubleshooting." These requirements include a formal troubleshooting plan and review and approval by an engineer. In addition, Procedure MDA-111, section 6.5 contains requirements for "complex troubleshooting." These requirements also include a formal plan and additional approval and evaluation of the plan. The continued troubleshooting past the initial shift on January 31, 2014, constituted extended troubleshooting, and the decision to continue work and troubleshoot the relay in the switch constituted complex troubleshooting. The licensee determined that the workers did not contact the supervisor when the troubleshooting fell outside the definition of simple troubleshooting, and did not perform complex and extended troubleshooting with an approved plan. The licensee also identified that the work order did not include all the requirements for extended and complex troubleshooting. If the troubleshooting plan had been approved and evaluated, the risk to plant operation could have been controlled.

The inspectors reviewed the work orders, procedures, and the root cause evaluation. The inspectors determined that the troubleshooting screening guidance was not clear in

its guidance for determining the category of troubleshooting. In addition, the inspectors determined that the work order did not contain specific information about what troubleshooting efforts were authorized for simple troubleshooting.

Analysis. The failure to follow the troubleshooting activities procedure was a performance deficiency. The performance deficiency was more than minor because it was associated with the human performance attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during power operations. Specifically, performing the additional troubleshooting steps without the required evaluation and notification resulted in a plant transient. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and Appendix A, Exhibit 1, "Initiating Events Screening Questions," the finding was determined to be of very low safety significance (Green) because the finding did not cause a reactor trip or the loss of mitigation equipment. The finding has a human performance cross-cutting aspect associated with documentation because the licensee failed to ensure that work packages were complete and thorough and that plant activities were governed by high-quality procedures [H.7].

Enforcement. This finding does not involve enforcement action because no violation of a regulatory requirement was identified. The licensee entered the finding into the corrective action program as Condition Report CR-2014-001268. The issue is being characterized as finding, FIN 05000446/2014005-02, "Failure to Follow the Troubleshooting Activities Procedure Results in a Plant Transient."

4OA5 Other Activities

a. Inspection Scope

The inspectors evaluated the impact of financial conditions on continued safe performance at Comanche Peak. Because the licensee's parent company, Energy Future Holdings, was under bankruptcy protection/reorganization during the inspection period, NRC Region IV conducted special reviews of processes at Comanche Peak. The inspectors evaluated several aspects of the licensee's operations to determine whether the financial condition of the station impacted plant safety. The factors reviewed included: (1) impact on staffing, (2) corrective maintenance backlog, (3) changes to the planned maintenance schedule, (4) corrective action program implementation, and (5) reduction in outage scope, including risk-significant modifications. In particular, the inspectors verified that licensee personnel continued to identify problems at an appropriate threshold and enter these problems into the corrective action program for resolution. The inspectors also verified that the licensee continued to develop and implement corrective actions commensurate with the significance of the problems identified.

The special review of processes at Comanche Peak included continuous reviews by the Resident Inspectors, as well as the specialist-led baseline inspections completed during the inspection period which are documented previously in this report.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

Exit Meeting Summary

On October 16, 2014, the inspectors presented the inservice inspection activities inspection results to Mr. T. McCool, Vice President, Engineering and Support, and other members of the licensee staff. The licensee acknowledged the issues presented. The licensee confirmed that any proprietary information reviewed by the inspectors had been returned or destroyed.

On December 11, 2014, the inspectors presented the radiation safety inspection results to Mr. F. Madden, Director, External Affairs, and other members of the licensee staff. The licensee acknowledged the issues presented. The licensee confirmed that any proprietary information reviewed by the inspectors had been returned or destroyed

On January 7, 2015, 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. Farnsworth, Director, Performance Improvement
D. Goodwin, Director, Work Management
T. Hope, Manager, Regulatory Affairs
J. Hull, Manager, Emergency Preparedness
F. Madden, Director, External Affairs
B. Mays, Assistant Chief Nuclear Officer
T. McCool, Vice President, Engineering and Support
D. McGaughey, Director, Operations
P. Passaligo, Engineering Program Manager
J. Patton, Manager, Nuclear Oversight
K. Peters, Site Vice President
B. St. Louis, Director, Nuclear Training
S. Sewell, Plant Manager
M. Stakes, Director, Maintenance
J. Taylor, Director, Site Engineering

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000446/2014005-01	NCV	Failure to Follow Procedure for Boundary Valve Leakage Testing (Section 4OA3)
05000446/2014005-02	FIN	Failure to Follow the Troubleshooting Activities Procedure Results in a Plant Transient (Section 4OA3)

Closed

05000446/2014-002-00	LER	Both Trains of Residual Heat Removal Inoperable During Testing in Mode 3 (Section 4OA3)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather

Condition Reports

2014-012553 2014-012554 2014-012680

Procedures

Number	Title	Revision
ABN-912	Extreme Cold Weather/Heat Tracing and Freeze Protection System Malfunction	8
OWI-912	Cold Weather	4

Miscellaneous Document

Number	Title	Revision
DBD-ME-302A	Diesel Generator Area Ventilation System	7

Section 1R04: Equipment Alignment

Condition Reports

2014-003050 2014-012585 2014-013333 2014-013661

Procedures

Number	Title	Revision
SOP-204B	Containment Spray System	6
SOP-304B	Auxiliary Feedwater System	13

Section 1R05: Fire Protection

Condition Report

2014-011817

Section 1R06: Flood Protection Measures

Condition Report

2014-011221

Calculations

Number	Title	Revision
SI-CA-0000-0662	Unit 1 Safeguards Building Flooding Analysis	8

Calculations

Number	Title	Revision
2-NU-0059	Unit 2 Safeguards Building – Flooding Analysis	6

Miscellaneous Documents

Number	Title	Revision
ER-ME-033	System Interaction Program Flooding Analyses	4
DBD-ME-007	Pipe Break Postulation and Effects	16
DBD-ME-225	Fire Suppression System	21

Section 1R08: Inservice Inspection Activities

Calculations

Number	Title	Revision
ME-CA-0000-5435	Determination of the EDY parameter for the Reactor Pressure Vessel Head	0
ME-CA-0000-5468	Determination of the frequency of examination of the Reactor Pressure Vessel Head utilizing the RIY parameter	1

Condition Reports

2011-006510	2011-007857	2012-001208	2012-001679	2012-002117
2012-002352	2013-003253	2013-003847	2013-005386	2013-005393
2013-005667	2013-006119	2013-006496	2013-006795	2014-000610
2014-000740	2014-001581	2014-002333	2014-004040	2014-010074
2014-011118	2014-011402	2014-011456		

Drawing

Number	Title	Revision
SK-0006-13-000008-01-01	Auxiliary Feedwater	1

Procedures

Number	Title	Revision
EPG-731	ASME Section XI Repair/Replacement Activities	3
STA-731	ASME Section XI Repair/Replacement Activities	7
STA-737	Boric Acid Corrosion Detection and Evaluation	8

Procedures

Number	Title	Revision
STA-737.01	Boric Acid Corrosion Detection and Evaluation	0
TX-ISI-11	Liquid Penetrant Examination for Comanche Peak Nuclear Power Plant	15
TX-ISI-70	Magnetic Particle Examination for Comanche Peak Nuclear Power Plant	13
TX-ISI-8	VT-1 and VT-3 Visual Examination Procedure	8
TX-ISI-IWE	Metal Containment Visual Examination	5
WDI-STD-1043	Radiation Safety Operating and Emergency Procedure for Radiography	1
WDI-STD-1049	Computed Radiographic Examination	2

Work Orders

4441863	4443682	4642698	4642772	4795800
4795803				

Miscellaneous Documents

Number	Title	Revision
	Unit 1 - Third Interval ASME Section XI Inservice Inspection Program Plan	1
	Reactor Vessel Lower Head Visual Examination Plan	1
SG-SGMP-13-13	Comanche Peak 1RF16 Steam Generator Condition Monitoring and Operational Assessment	
SG-SGMP-13-6	Comanche Peak 1RF16 Steam Generator Degradation Assessment	1
	Unit 1 Third Interval Augmented Inservice Inspection Plan	0
	Unit 1 Second Interval Augmented Inservice Inspection Plan	1
	Reactor Vessel Closure Head Visual Examination Plan	4
	RCS Materials Management Strategic Plan	4

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

Procedure

Number	Title	Revision
IPO-002A	Plant Startup From Hot Standby	20

Section 1R12: Maintenance Effectiveness

Condition Reports

2012-000039	2014-005903	2014-008096	2014-009694	

Drawing

Number	Title	Revision
31978-15	24” Class 150 Single Flange Valve Assembly with through Holes, no Actuator	A

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Condition Reports

2014-012862

Section 1R15: Operability Determinations and Functionality Assessments

Calculations

Number	Title	Revision
WCAP-17276	Investigation of Simplified Equation for Gas Transport	1

Condition Reports

2011-005288	2011-012499	2013-001299	2014-005016	2014-008062
2014-011509	2014-011528	2014-012077	2014-012107	2014-012503
2014-012645	2014-013350			

Procedures

Number	Title	Revision
MDA-304	Control of Heavy Loads and Critical Lifts	7
MSG-2013	Polar Crane/Telescoping Jib Crane Operating Instructions and Restrictions	4
OPT-220	Fire Suppression Water System Operability Test	11

Procedures

Number	Title	Revision
STI 422.01	Operability Determination and Functionality Assessment Program	2

Section 1R19: Post-Maintenance Testing

Condition Reports

2014-010990	2014-011239	2014-011263	2014-011434	2014-011678
2014-012074	2014-012077	2014-012396		

Work Orders

3939725	4470807	4607445	4612401	4613717
4620052	4625645	4626977	4627252	4812780
4845722	4935098	4962175		

Procedures

Number	Title	Revision
ETP-304A	Turbine Driven Auxiliary Feedwater Pump Overspeed Trip	4
MSM-C1-9901	Reactor Vessel Head Removal and Installation	5
MSM-G0-2302	Reactor Coolant Pump Motor Replacement	3
OPT-108A	Remote Shutdown Instrumentation Check	9
OPT-117	Digital Rod Position Indication System	5
SOP-614A	Alternate Power Diesel Generator Operation	13

Section 1R20: Refueling and Other Outage Activities

Condition Reports

2014-006997	2014-010939	2014-011016	2014-011120	2014-011525
2014-012149	2014-012176	2014-012176	2014-013621	

Procedure

Number	Title	Revision
IPO-002A	Plant Startup From Hot Standby	20

Work Orders

4621322 4626977

Section 1R22: Surveillance Testing

Procedures

Number	Title	Revision
OPT-306	Containment Sump Inspection	7
RFO-102	Refueling Operations	13

Work Orders

4133959 4506131 4911655

Miscellaneous Documents

Number	Title
LDCR-2014-002	RWST SI Piping Connection for Mode 6 Operation
LTR-CDSA-12-3	Additional Boration Flow Path in Mode 6 with Reactor Vessel Head Removed

Section 2RS5: Radiation Monitoring Instrumentation

Calibrations

Work Order	Title	Date
4225901	South Vent Stack Wide Range Gas Monitor 5570A Sample	May 6, 2013
3839933	South Vent Stack Wide Range Gas Monitor 5570A Sample	August 18, 2011
4287820	Liquid Waste Processing Discharge Radiation Detector	June 17, 2013
3912453	Liquid Waste Processing Discharge Radiation Detector	November 7, 2011
4537652	Turbine Building Sump 1-02 Radiation Detector	August 20, 2014
4093370	Turbine Building Sump 1-02 Radiation Detector	December 7, 2012
4608307	Unit 1 Containment EL 905 High Range Radiation	October 27, 2014
4274798	Unit 1 Containment EL 905 High Range Radiation	April 17, 2013
	Calibration of the APEX- In Vivo Fastscan2 Counting System	December 18, 2013
	HP 1620 Eberline Remball	December 13, 2013
	HP 0055 Small Articles Monitor	December 17, 2013

Calibrations

Work Order	Title	Date
	2151 AMS-4	August 6, 2014
	1969 Eberline ASP-2	August 20, 2014
	4034 Radeye G	February 18, 2013

Condition Reports

2013-000052	2013-001273	2013-001723	2013-001909	2013-002587
2013-005794	2013-006036	2013-006871	2013-007060	2013-008607
2013-008988	2013-009476	2013-010093	2013-010124	2013-010794
2013-011577	2014-001237	2014-001297	2014-006906	2014-012894

Procedures

Number	Title	Revision
RPI-508	Calibration of the Stand Up Whole Body Counter	14
RPI-531	Operation of the Shepherd Panoramic Irradiator	8
RPI-532	Calibration of the Shepherd Panoramic Irradiator	11
RPI-800	Control of Radiation Protection Equipment	13
RPI-802	Performance of Source Checks	21
RPI-809	Operation of the Calibration Well Source	12
RPI-886	Calibration of the Eberline PM-7 Personnel Monitor	6
RPI-888	Calibration of Portable Air Sample Equipment	4
RPI-889	Calibration of the Eberline AMS-4	3
RPI-895	Calibration of the NE Technology SAM Small Articles Monitor	5
INC-7079	Channel Calibration Containment High Range Radiation Monitor Channels 1-RE-6290A/B and 2-RE-6290A/B	6
STA-658	Radiation Protection Equipment Calibration Program	11
STA-732	Primary to Secondary Leakage	4

Miscellaneous Documents

Title	Revision
CNPP FSAR Chapter 11	Amendment No. 105
Offsite Dose Calculation Manual Unit 1 and Unit 2	32

Section 2RS6: Radioactive Gaseous and Liquid Effluent Treatment

Condition Reports

2012-013458	2013-000007	2013-000360	2013-001003	2013-009088
2013-010305	2013-012183	2013-012468	2013-012680	2014-000508
2014-002701	2014-012775			

Procedures

Number	Title	Revision
CHM-170	Liquid and Gaseous Effluent Program	4
CHM-230	Guidelines for Sample Collection	3
CHM-513A	Operation of the Unit 1 Process Sampling System	7
CHM-513B	Operation of the Unit 2 Process Sampling System	3
CHM-516	Sampling and Analysis of Gaseous Waste Systems	9
CHM-517	Chemistry Control of Liquid Waste Systems	9
CLI-705	Determination of Tritium	9
CLI-741	Setpoint Modification and DRMS Pre-Release Surveillance	7
CLI-744	Radioactive Effluent Pre-Release Permit Processing	1
CLI-745	Radioactive Effluent Post-Release Permit Processing and Surveillance Tracking	3
COP-801	Containment Ventilation	2
COP-816	Plant Ventilation	6
RPI-626	Alpha Monitoring Program	6
STA-603	Control of Station Radioactive Effluents	21
STA-619	Administrative Control of the Digital Radiation Monitoring System	7

Release Permits

G2013-009	G2014-176	L2013-022	L2014-066

Sampling and Analysis Results

Number	Title
CHM 170-510-15	LVW Pond Quarterly Composite – 1Q 2013
CHM 170-510-15	LVW Pond Quarterly Composite – 2Q 2013
CHM 170-510-15	LVW Pond Quarterly Composite – 3Q 2013

Sampling and Analysis Results

CHM 170-510-15	LVW Pond Quarterly Composite – 4Q 2013
CHM 170-510-15	LVW Pond Quarterly Composite – 1Q 2014
CHM 170-510-15	LVW Pond Quarterly Composite – 2Q 2014
CHM 170-510-15	LVW Pond Quarterly Composite – 3Q 2014
CHM 170-510-15	LVW Pond Quarterly Composite – 4Q 2012
CHM-170-510-18	Radioactive Liquid Effluent Quarterly Composite Sample – 4Q 2012
CHM-170-510-18	Radioactive Liquid Effluent Quarterly Composite Sample – 1Q 2013
CHM-170-510-18	Radioactive Liquid Effluent Quarterly Composite Sample – 2Q 2013
CHM-170-510-18	Radioactive Liquid Effluent Quarterly Composite Sample – 3Q 2013
CHM-170-510-18	Radioactive Liquid Effluent Quarterly Composite Sample – 4Q 2013
CHM-170-510-18	Radioactive Liquid Effluent Quarterly Composite Sample – 1Q 2014
CHM-170-510-18	Radioactive Liquid Effluent Quarterly Composite Sample – 2Q 2014
CHM-170-510-18	Radioactive Liquid Effluent Quarterly Composite Sample – 3Q 2014

In-Place Filter Testing Records

System	Test	Date
Primary Plant Ventilation Exhaust Filter Unit X-02	Filter Test	February 13, 2014
Primary Plant Ventilation Exhaust Filter Unit X-01	Carbon Analysis	October 29, 2013
Primary Plant Ventilation Exhaust Filter Unit X-01	Filter Test	October 29, 2013
Primary Plant Ventilation Exhaust Filter Unit X-15	Carbon Analysis	December 3, 2013
Primary Plant Ventilation Exhaust Filter Unit X-02	Carbon Analysis	September 18, 2013
Primary Plant Ventilation Exhaust Filter Unit X-16	Carbon Analysis	July 29, 2013

Miscellaneous Documents

Number	Title	Revision/Date
EVAL-2013-006	Radioactive Waste, Effluent, Environmental, and Chemistry	April 24, 2013
ME-CA-0000-3161	Annual Doses Due to Routine Activity Releases in Liquid Effluents	0
	CPSES Offsite Dose Calculation Manual - Unit 1 and Unit 2	32
	Final Safety Analysis Report - Ch. 11: Radioactive Waste Management	105
	Results of Radiochemistry Cross Check Program - 4th Quarter 2013	March 12, 2014

Miscellaneous Documents

Number	Title	Revision/Date
	2012 Radioactive Effluent Release Report	March 20, 2013
	2013 Radioactive Effluent Release Report	March 19, 2014
	Radiation Monitoring System Health Report	4th Quarter 2013
	Radiation Monitoring System Health Report	1st Quarter 2014
	Radiation Monitoring System Health Report	2nd Quarter 2014
	Radiation Monitoring System Health Report	3rd Quarter 2014

Section 2RS7: Radiological Environmental Monitoring Program

Condition Reports

2014-013393	2014-013335	2014-007981	2014-001658	2014-001925
2014-001059	2014-012215	2013-012201	2014-006906	2013-010794
2013-001838				

Procedures

Number	Title	Revision
ENV-317	Proper Handling Packaging & Shipping of Solid Waste Materials	6
STA-654	Groundwater Protection Program	8
RPI-521	General Area Monitoring Program	12
RPI-710	Radiological Environmental Monitoring, Sampling, and Analysis Program	18
RPI-713	Collection, Preparation, and Shipment of Radiological Environmental Samples	12
RPI-714	Land Use Census	5
CHM-230	Guidelines for Sample Collection	3
CLI-705	Determination of Tritium	9

Audits, Self-Assessments

Number	Title	Date
	Self-Assessment: Radioactive Waste, Effluent, and Environmental	November 27, 2013
GL-QS-B-001	Quality Assurance for GEL Laboratories LLC	November 18, 2014

Audits, Self-Assessments

Number	Title	Date
EVAL-2013-006	Radioactive Waste, Effluent, Environmental, and Chemistry (QA)	April 24, 2014

Miscellaneous Documents and Annual Reports

Title	Revision/Date
2013 Inter-Laboratory Comparison Results	November 13, 2013
2012 Land Use Census	March 20, 2012
2013 Land Use Census	April 24, 2013
2012 Radiological Environmental Operating Report	March 20, 2012
2013 Radiological Environmental Operating Report	April 24, 2013
Percentage of Good Control Room Meteorological Data from Jan. 1, 2013 to Dec. 11, 2014	December 11, 2014
CNPP Hydrogeology Report	August 21, 2013
Offsite Dose Calculation Manual – Units 1 & 2	32

Meteorological Tower Instrument Calibrations

Order	Title	Date
WO-4842442	Meteorological 60M Instrument Channel Calibrations	November 3, 2014
WO-4842360	Meteorological 60M Wind Speed/Direction Calibrations	November 3, 2014

Environmental Laboratory Reports

Order	Title	Date
L 16242-01	AREVA Fish Raw H-3	March 23, 2010
L 16242-02	AREVA Fish Cooked H-3	March 23, 2010
SDG357885	GEL Surface Water Report	November 3, 2014
SDG354226	GEL Surface Water Report	August 26, 2014
SDG341742	GEL Sediment Sample Report	February 13, 2014
SDG357889	GEL Groundwater Report	October 28, 2014
	Texas Commission of Environmental Quality Exemption Letter	May 14, 2014

Section 2RS8: Radioactive Solid Waste Processing, and Radioactive Material Handling, Storage, and Transportation

Condition Reports

2013-000896	2013-000897	2013-001195	2013-001904	2013-003880
2013-004721	2013-006240	2013-008915	2013-008920	2013-009750
2013-011177	2014-001123	2014-001925	2014-004905	2014-004944
2014-005021	2014-005091			

Procedures

Number	Title	Revision
RPI-204	Radioactive Waste Handling	14
RPI-230	Radioactive Material Shipments	7
RPI-232	Characterizing Radioactive Material for Shipment	6
RPI-238	Radioactive Material/Waste Shipment Surveys	13
RPI-242	Radioactive Waste Characterization and Classification	8
RPI-243	Packaging Radioactive Waste for Shipment	8
RPI-247	Radioactive Waste Shipment Documentation	14
RPI-263	RMC Activities	3
RPI-274	CPNPP Transportation Security Plan	3
STA-652	Radioactive Material Control	18
STA-709	Radioactive Waste Management Program	10
STA-713	Process Control Program (PCP)	3

Audit, Self-Assessment

Number	Title	Date
CR-2014-010693	STARS 2014 Targeted Self-Assessment of CPNPP's 10 CFR Part 37 Security Plan and Program	October 2, 2014

Radiological Surveys

Number	Title	Date
14-02-0014	Classification of High Integrity Container – Vault #18	February 3, 2014
14-10-1659	RCA Yard Access and Storage Building	October 27, 2014
14-11-0303	Interim Low Level Rad Waste Storage Area	November 17, 2014
14-12-0010	Warehouse "C" Yard	December 1, 2014

Radiological Surveys

Number	Title	Date
14-12-0011	RCA Yard	December 1, 2014
14-12-0081	Old Steam Generator Storage Facility	December 4, 2014

Radioactive Material Shipments

Number	Title	Date
2012-009	UN3321, Radioactive Material, LSA-II, Anion Resin	April 4, 2012
2013-016	UN3321, Radioactive Material, LSA-II – Dry Active Waste	March 13, 2013
2013-043	UN3321, Radioactive Material, LSA-II – Dry Active Waste	September 26, 2013
2013-048	UN3321, Fissile-Excepted, Radioactive Material, LSA-II, RQ – Radionuclides, Yellow III – Resin	November 18, 2013
2013-050	UN3321, Fissile-Excepted, Radioactive Material, LSA-II – Resin	December 2, 2013
2014-013	UN3321, Fissile-Excepted, Radioactive Material, LSA-II, RQ – Radionuclides, Yellow III – Resin	February 25, 2014
2014-039	UN3321, Radioactive Material, LSA-II – Dry Active Waste	May 19, 2014

Miscellaneous Documents

Number	Title	Revision/Date
	Final Safety Analysis Report – Chapter 11.4: Solid Waste Management System	105
	Final Safety Analysis Report – Chapter 12.2.1.6: The Old Steam Generator Storage Facility	105
WMG-4072-RE-054	Comanche Peak Unit 1 – Steam Generator Characterization	November 2005
	2012 Radioactive Effluent Release Report	March 20, 2013
	2013 Radioactive Effluent Release Report	March 19, 2014
2013-0008	Radwaste Sample Data Sheet: U1 RCS Filter 10-30-2013	December 17, 2013
2013-0009	Radwaste Sample Data Sheet: U2 RCS Filter 10-30-2013	December 17, 2013
WMG Project 13-111E	Characterization and Classification of the Comanche Peak Unit 1 Old Reactor Vessel Closure Head	February 4, 2014

Miscellaneous Documents

Number	Title	Revision/Date
WMG-4072-RE-054	Comanche Peak Unit 1 – Steam Generator Characterization	November 2005
PO 619261-12	Package Characterization Report for Vault 18	February 27, 2014
Log No. 2014-05-0006	TCEQ Response Letter to CPNPP Exemption Concurrence Request	May 21, 2014
2014-0006	Radwaste Sample Data Sheet: DAW 6-30-2014	June 30, 2014
	Order Authorizing the Export of Waste for Luminant – CPNPP	December 5, 2014
	Training Records for Shipping Personnel	December 10, 2014

Section 4OA1: Performance Indicator Verification

Miscellaneous Document

Number	Title	Revision
R&R-PN-112	Reactor Oversight MSPI Basis Document	7

Section 4OA2: Problem Identification and Resolution

Condition Reports

2011-008870	2012-004511	2012-005809	2012-008946	2013-000018
2014-001664	2014-003017	2014-004586	2014-004646	2014-011463

Procedures

Number	Title	Revision
CAP-104	Performing Effectiveness Reviews	2
STA-200	Written Instruction Program	0

Work Orders

4955558	4595833	4595837

Miscellaneous Document

Number	Title	Date
EVAL-2014-008	Work Management	August 14, 2014

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

Condition Reports

2013-012085	2014-001268	2014-005254	2014-005254	2014-006030
2014-007776	2014-007937	2014-013331	2014-013332	2014-013332

Procedures

Number	Title	Revision
ABN-302	Feedwater, Condensate, Heater Drain System Malfunction	14
IPO-001B	Plant Heatup From Cold Shutdown to Hot Standby	10
MDA-111	Maintenance Department Troubleshooting Activities	4
OPT-615B	RCS Pressure Boundary Leakage Test for Loop 3 CL Injection Valves	2
OPT-616B	RCS Pressure Boundary Leakage Test for Loop 4 CL Injection Valves	OT1
OPT-616B	RCS Pressure Boundary Leakage Test for Loop 4 CL Injection Valves	2
STA-422	Processing Condition Reports	31
STA-601	Authority for Equipment Operation	17
STA-606	Control of Maintenance and Work Activities	32
TDM-804A	Equipment Data Tank Height Vs Volume	3

Work Orders

3503296	3829609	4150325	4150331	4509354
4509354	4509360	4519593	4782167	4782167

REQUEST FOR INFORMATION – INSERVICE INSPECTION

On October 6, 2014, inspectors will perform the baseline inservice inspection using Inspection Procedure 71111.08, "Inservice Inspection Activities." Experience has shown that this inspection is a resource intensive inspection both for the inspectors and your staff. In order to minimize the impact to your onsite resources and to ensure a productive inspection, we have enclosed a request for documents needed for this inspection. These documents have been divided into two groups. The first group (Section A) identified information to be provided prior to the inspection to ensure that the inspectors are adequately prepared. The second group (Section B) identifies the information the inspectors will need upon arrival at the site. It is important that all of these documents are up to date and complete in order to minimize the number of additional documents requested during the preparation and/or the onsite portions of the inspection.

We have discussed the schedule for these inspection activities with your staff and understand that our regulatory contact for this inspection will be Mr. James Barnette of your licensing organization. The tentative inspection schedule is as follows:

Preparation week: September 29 - October 3, 2014
Onsite weeks: October 6 - October 17, 2014

Our inspection dates are subject to change based on your updated schedule of outage activities. If there are any questions about this inspection or the material requested, please contact the lead inspector Robert Williams at (404) 997-4664 (Robert.Williams@nrc.gov).

A. Information to be Provided Prior to the Inspection:

.1 ISI/Welding Programs and Schedule Information

a) A detailed schedule (including preliminary dates) of:

i. Nondestructive examinations planned for ASME Code Class Components performed as part of your ASME Section XI, risk informed (if applicable), and augmented inservice inspection programs during the upcoming outage.

ii. Examinations planned for Alloy 82/182/600 components that are not included in the Section XI scope (If applicable)

iii. Examinations planned as part of your boric acid corrosion control program (Mode 3 walkdowns, bolted connection walkdowns, etc.)

iv. Welding activities that are scheduled to be completed during the upcoming outage (ASME Class 1, 2, or 3 structures, systems, or components)

b) A copy of ASME Section XI Code Relief Requests and associated NRC safety evaluations applicable to the examinations identified above.

i. A list of ASME Code Cases currently being used to include the system and/or component the Code Case is being applied to.

c) A list of nondestructive examination reports which have identified recordable or rejectable indications on any ASME Code Class components since the beginning of the last refueling outage. This should include the previous Section XI pressure test(s)

conducted during start up and any evaluations associated with the results of the pressure tests.

d) A list including a brief description (e.g., system, code class, weld category, nondestructive examination performed) associated with the repair/replacement activities of any ASME Code Class component since the beginning of the last outage and/or planned this refueling outage.

e) If reactor vessel weld examinations required by the ASME Code are scheduled to occur during the upcoming outage, provide a detailed description of the welds to be examined and the extent of the planned examination. Please also provide reference numbers for applicable procedures that will be used to conduct these examinations.

f) Copy of any 10 CFR Part 21 reports applicable to structures, systems, or components within the scope of Section XI of the ASME Code that have been identified since the beginning of the last refueling outage.

g) A list of any temporary non-code repairs in service (e.g., pinhole leaks).

h) Please provide copies of the most recent self-assessments for the inservice inspection, welding, and Alloy 600 programs.

.2 Reactor Pressure Vessel Head

a) Provide a detailed scope of the planned bare metal visual examinations (e.g., volume coverage, limitations, etc.) of the vessel upper head penetrations and/or any nonvisual nondestructive examination of the reactor vessel head including the examination procedures to be used.

i. Provide the records recording the extent of inspection for each penetration nozzle including documents which resolved interference or masking issues that confirm that the extent of examination meets 10 CFR 50.55a(g)(6)(ii)(D).

ii. Provide records that demonstrate that a volumetric or surface leakage path examination assessment was performed.

Copy of current calculations for EDY, and RIY as defined in Code Case N-729-1 that establish the volumetric and visual inspection frequency for the reactor vessel head and J-groove welds.

.3 Boric Acid Corrosion Control Program

a) Copy of the procedures that govern the scope, equipment and implementation of the inspections required to identify boric acid leakage and the procedures for boric acid leakage/corrosion evaluation.

b) Please provide a list of leaks (including code class of the components) that have been identified since the last refueling outage and associated corrective action documentation. If during the last cycle, the unit was shutdown, please provide documentation of containment walkdown inspections performed as part of the boric acid corrosion control program.

.4 Steam Generator Tube Inspections

a) A copy of the current version of the following documents:

i. SG ISI Inspection Program and Plan

ii. Condition Monitoring Assessment

iii. Operational Assessment

b) A copy of the current Technical Specifications for the SG Inservice Inspection Program, including recent NRC Safety Evaluation Reports for license amendments issued since the last refueling outage (e.g. alternate repair criteria as a result of the incorporation of Technical Specification Task Force activities).

c) Confirmation of whether SG primary-to-secondary leakage was identified and quantified during the previous operating cycle. If primary-to-secondary leakage was identified, please provide documentation describing the affected SG and corrective actions completed or planned for this condition.

.5 Additional Information Related to all Inservice Inspection Activities

a) A list with a brief description of inservice inspection, boric acid corrosion control program, and steam generator tube inspection related issues (e.g., condition reports) entered into your corrective action program since the beginning of the last refueling outage. For example, a list based upon data base searches using key words related to piping or steam generator tube degradation such as: inservice inspection, ASME Code, Section XI, NDE, cracks, wear, thinning, leakage, rust, corrosion, boric acid, or errors in piping/steam generator tube examinations.

b) Provide training (e.g. Scaffolding, Fall Protection, FME, Confined Space) if required, for the activities described in A.1 through A.4.

c) Please provide names and phone numbers for the following program leads:

- Inservice inspection (examination, planning)
- Containment exams
- Reactor pressure vessel head exams
- Snubbers and supports
- Repair and replacement program
- Licensing
- Site welding engineer
- Boric acid corrosion control program
- Steam generator inspection activities (site lead and vendor contact)

B. Information to be Provided Onsite to the Inspectors at the Entrance Meeting:

.1 Inservice Inspection / Welding Programs and Schedule Information

a) Updated schedules for inservice inspection/nondestructive examination activities, including planned welding activities, and schedule showing contingency repair plans, if available.

b) For ASME Code Class welds selected by the inspector from the lists provided from section A of this enclosure, please provide copies of the following documentation for each subject weld:

   i. Weld data sheet (traveler).

   ii. Weld configuration and system location.

   iii. Applicable Code Edition and Addenda for weldment.

   iv. Applicable Code Edition and Addenda for welding procedures.

   v. Applicable welding procedures used to fabricate the welds.

   vi. Copies of procedure qualification records (PQRs) supporting the weld procedures from B.1.b.v.

   vii. Copies of welder's performance qualification records (WPQ).

   viii. Copies of the nonconformance reports for the selected welds (If applicable).

   ix. Radiographs of the selected welds and access to equipment to allow viewing radiographs (if radiographic testing was performed).

   x. Copies of the preservice examination records for the selected welds.

   xi. Readily accessible copies of nondestructive examination personnel qualifications records for reviewing.

c) For the inservice inspection related corrective action issues selected by the inspectors from section A of this enclosure, provide a copy of the corrective actions and supporting documentation.

d) For the nondestructive examination reports with relevant conditions on ASME Code Class components selected by the inspectors from Section A above, provide a copy of the examination records, examiner qualification records, and associated corrective action documents.

e) A copy of (or ready access to) most current revision of the inservice inspection program manual and plan for the current interval.

f) For the nondestructive examinations selected by the inspectors from section A of this enclosure, provide a copy of the nondestructive examination procedures used to perform the examinations (including calibration and flaw characterization/sizing procedures). For ultrasonic examination procedures qualified in accordance with ASME Code, Section XI, Appendix VIII, provide documentation supporting the procedure qualification (e.g. the EPRI performance demonstration qualification summary sheets). Also, include qualification documentation of the specific equipment to be used (e.g., ultrasonic unit, cables, and transducers including serial numbers) and nondestructive examination personnel qualification records.

.2 Reactor Pressure Vessel Head (RPVH)

a) Provide drawings showing the following (if performing any RPVH inspection activities):

   i. RPVH and control rod drive mechanism nozzle configurations.

   ii. RPVH insulation configuration.

   Note: The drawings listed above should include fabrication drawings for the nozzle attachment welds as applicable.

b) Copy of the documents which demonstrate that the procedures to be used for volumetric examination of the reactor vessel head penetration J-groove welds were qualified by a blind demonstration test in accordance with 10 CFR 50.55a(g)(6)(ii)(D).

c) Copy of volumetric, surface and visual examination records for the prior inspection of the reactor vessel head and head penetration J-groove welds.

.3 Boric Acid Corrosion Control Program

a) Please provide boric acid walk down inspection results, an updated list of boric acid leaks identified so far this outage, associated corrective action documentation, and overall status of planned boric acid inspections.

b) Please provide any engineering evaluations completed for boric acid leaks identified since the end of the last refueling outage. Please include a status of corrective actions to repair and/or clean these boric acid leaks. Please identify specifically which known leaks, if any, have remained in service or will remain in service as active leaks.

.4 Steam Generator Tube Inspections

a) None

.5 Codes and Standards

a) Ready access to (i.e., copies provided to the inspector(s) for use during the inspection at the onsite inspection location, or room number and location where available):

   i. Applicable Editions of the ASME Code (Sections V, IX, and XI) for the inservice inspection program and the repair/replacement program.

   ii. EPRI and industry standards referenced in the procedures used to perform the steam generator tube eddy current examination.

b) Copy of the performance demonstration initiative (PDI) generic procedures with the latest applicable revisions that support site qualified ultrasonic examinations of piping welds and components (e.g., PDI-UT-1, PDI-UT-2, PDI-UT-3, PDI-UT-10, etc.).

c) EPRI and industry standard references in the site procedures used to perform the SG tube eddy current examination, which includes EPRI documents: TR-107621-R1, “Steam Generator Integrity Assessment Guidelines,” TR-107620-R1, “Steam Generator In-Situ Pressure Test Guidelines,” Steam Generator Management Program: Steam Generator Integrity Assessment Guidelines, Part 10, and 1003138, “Pressurized Water Reactor Steam Generator Examination Guidelines.”

d) Boric Acid Corrosion Guidebook Revision 1 – EPRI Technical Report 1000975.

REQUEST FOR INFORMATION - RADIATION SAFETY INSPECTION

The following items are requested to support the occupational/public radiation safety inspection conducted during the week of December 8-12, 2014. The areas of inspection are listed below in the attachment.

Please provide the requested information on or before November 21, 2014. Please submit this information using the same lettering system as below. For example, all contacts and phone numbers for Inspection Procedure 71124.0**1** should be in a file/folder titled "**1**- A," applicable organization charts in file/folder "**1**- B," etc. If information is placed on *ims.certrec.com*, please ensure the inspection exit date entered is at least 30 days later than the onsite inspection dates, so the inspectors will have access to the information while writing the report.

In addition to the corrective action document lists provided for each inspection procedure listed below, please provide updated lists of corrective action documents at the entrance meeting. The dates for these lists should range from the end dates of the original lists to the day of the entrance meeting.

Since more than one inspection procedure is to be conducted and the information requests appear to be redundant, there is no need to provide duplicate copies. Enter a note explaining in which file the information can be found.

If you have any questions or comments, please contact Louis Carson II at (817) 200-1221 or Louis.Carson@nrc.gov.

1. Radiation Monitoring Instrumentation (71124.05)

Date of Last Inspection: December 19, 2012

A. List of contacts and telephone numbers for the following areas:

1. Effluent monitor calibration
2. Radiation protection instrument calibration
3. Installed instrument calibrations
4. Count room and laboratory instrument calibrations

B. Applicable organization charts

C. Copies of audits, self-assessments, vendor or NUPIC audits for contractor support and LERs, written since date of last inspection, related to:

1. Area radiation monitors, continuous air monitors, criticality monitors, portable survey instruments, electronic dosimeters, teledosimetry, personnel contamination monitors, or whole body counters
2. Installed radiation monitors

D. Procedure index for:

1. Calibration, use and operation of continuous air monitors, criticality monitors, portable survey instruments, temporary area radiation monitors, electronic dosimeters, teledosimetry, personnel contamination monitors, and whole body counters
2. Calibration of installed radiation monitors

E. Please provide specific procedures related to the following areas noted below. Additional Specific Procedures will be requested by number after the inspector reviews the procedure indexes.

1. Calibration of portable radiation detection instruments (for portable ion chambers)
2. Whole body counter calibration
3. Laboratory instrumentation quality control

F. A summary list of corrective action documents (including corporate and subtiered systems) written since date of last inspection, related to the following programs:

1. Area radiation monitors, continuous air monitors, criticality monitors, portable survey instruments, electronic dosimeters, teledosimetry, personnel contamination monitors, whole body counters
2. Installed radiation monitors
3. Effluent radiation monitors
4. Count room radiation instruments

NOTE: The lists should indicate the significance level of each issue and the search criteria used. Please provide in document formats which are "searchable" so that the inspector can perform word searches.

G. Offsite dose calculation manual, technical requirements manual, or licensee controlled specifications which lists the effluent monitors and calibration requirements

H. Current calibration data for the whole body counter's

I. Primary to secondary source calibration correlation for effluent monitors

J. A list of the point of discharge effluent monitors with the two most recent calibration dates and the work order numbers associated with the calibrations.

K. Radiation Monitoring System health report for the previous 12 months

6. Radioactive Gaseous and Liquid Effluent Treatment (71124.06)

Date of Last Inspection: December 19, 2012

A. List of contacts and telephone numbers for the following areas:

1. Radiological effluent control
2. Engineered safety feature air cleaning systems

B. Applicable organization charts

C. Audits, self-assessments, vendor or NUPIC audits of contractor support, and LERs written since date of last inspection, related to:

1. Radioactive effluents
2. Engineered Safety Feature Air cleaning systems

D. Procedure indexes for the following areas:

1. Radioactive effluents
2. Engineered Safety Feature Air cleaning systems

E. Please provide specific procedures related to the following areas noted below. Additional Specific Procedures will be requested by number after the inspector reviews the procedure indexes.

1. Sampling of radioactive effluents
2. Sample analysis
3. Generating radioactive effluent release permits
4. Laboratory instrumentation quality control
5. In-place testing of HEPA filters and charcoal absorbers
6. New or applicable procedures for effluent programs (e.g., including ground water monitoring programs)

F. List of corrective action documents (including corporate and subtiered systems) written since date of last inspection, associated with:

1. Radioactive effluents
2. Effluent radiation monitors
3. Engineered Safety Feature Air cleaning systems

NOTE: The lists should indicate the significance level of each issue and the search criteria used. Please provide in document formats which are “searchable” so that the inspector can perform word searches.

G. 2012 and 2013 Annual Radioactive Effluent Release Report or the two most recent reports

H. Current Copy of the Offsite Dose Calculation Manual

I. Copy of the 2012 and 2013 interlaboratory comparison results for laboratory quality control performance of effluent sample analysis, or the two most recent results

J. Effluent sampling schedule for the week of the inspection

K. New entries into 10 CFR 50.75(g) files since date of last inspection

L. Operations department (or other responsible department) log records for effluent monitors removed from service or out of service

M. Listing or log of liquid and gaseous release permits since date of last inspection

N. A list of the technical specification-required air cleaning systems with the two most recent surveillance test dates of in-place filter testing (of HEPA filters and charcoal absorbers) and laboratory testing (of charcoal efficiency) and the work order numbers associated with the surveillances

O. System Health Report for radiation monitoring instrumentation. Also, please provide a specific list of all effluent radiation monitors that were considered inoperable for 7 days or more since December 19, 2012. If applicable, please provide the relative Special Report and condition report(s).

P. A list of all radiation monitors that are considered §50.65/Maintenance Rule equipment.

Q. A list of all significant changes made to the Gaseous and Liquid Effluent Process Monitoring System since the last inspection. If applicable, please provide the corresponding FSAR section in which this change was documented.

R. A list of any occurrences in which a non-radioactive system was contaminated by a radioactive system. Please include any relative condition report(s).

7. Radiological Environmental Monitoring Program (71124.07)

Date of Last Inspection: December 19, 2012

A. List of contacts and telephone numbers for the following areas:

1. Radiological environmental monitoring
2. Meteorological monitoring

B. Applicable organization charts

C. Audits, self-assessments, vendor or NUPIC audits of contractor support, and LERs written since date of last inspection, related to:

1. Radiological environmental monitoring program (including contractor environmental laboratory audits, if used to perform environmental program functions)
2. Environmental TLD processing facility
3. Meteorological monitoring program

D. Procedure index for the following areas:

1. Radiological environmental monitoring program
2. Meteorological monitoring program

E. Please provide specific procedures related to the following areas noted below. Additional Specific Procedures will be requested by number after the inspector reviews the procedure indexes.

1. Environmental Program Description
2. Sampling, collection and preparation of environmental samples
3. Sample analysis (if applicable)
4. Laboratory instrumentation quality control
5. Procedures associated with the Offsite Dose Calculation Manual
6. Appropriate QA Audit and program procedures, and/or sections of the station's QA manual (which pertain to the REMP)

F. A summary list of corrective action documents (including corporate and subtiered systems) written since date of last inspection, related to the following programs:

1. Radiological environmental monitoring
2. Meteorological monitoring

NOTE: The lists should indicate the significance level of each issue and the search criteria used. Please provide in document formats which are "searchable" so that the inspector can perform word searches.

G. Wind Rose data and evaluations used for establishing environmental sampling locations

H. Copies of the 2 most recent calibration packages for the meteorological tower instruments

I. Copy of the 2012 and 2013 Annual Radiological Environmental Operating Report and Land Use Census, and current revision of the Offsite Dose Calculation Manual, or the two most recent reports

J. Copy of the environmental laboratory's interlaboratory comparison program results for 2012 and 2013, or the two most recent results, if not included in the annual radiological environmental operating report

K. Data from the environmental laboratory documenting the analytical detection sensitivities for the various environmental sample media (i.e., air, water, soil, vegetation, and milk)

L. Quality Assurance audits (e.g., NUPIC) for contracted services

M. Current NEI Groundwater Initiative Plan and status

N. Technical requirements manual or licensee controlled specifications which lists the meteorological instruments calibration requirements

O. A list of Regulatory Guides and/or NUREGs that you are currently committed to relative to the *Radiological Environmental Monitoring Program*. Please include the revision and/or date for the committed item and where this can be located in your current licensing basis/UFSAR.

P. If applicable, per NEI 07-07, provide any reports that document any spills/leaks to groundwater since the last inspection.

8. Radioactive Solid Waste Processing, and Radioactive Material Handling, Storage, and Transportation (71124.08)

Date of Last Inspection: December 19, 2012

A. List of contacts and telephone numbers for the following areas:

1. Solid Radioactive waste processing
2. Transportation of radioactive material/waste

B. Applicable organization charts (and list of personnel involved in solid radwaste processing, transferring, and transportation of radioactive waste/materials)

C. Copies of audits, department self-assessments, and LERs written since date of last inspection related to:

1. Solid radioactive waste management
2. Radioactive material/waste transportation program

D. Procedure index for the following areas:

1. Solid radioactive waste management
2. Radioactive material/waste transportation

E. Please provide specific procedures related to the following areas noted below. Additional Specific Procedures will be requested by number after the inspector reviews the procedure indexes.

1. Process control program
2. Solid and liquid radioactive waste processing

3. Radioactive material/waste shipping
4. Methodology used for waste concentration averaging, if applicable
5. Waste stream sampling and analysis
6. Receipt & Shipment of 10 CFR Part 37 Quantities of RAM

F. A summary list of corrective action documents (including corporate and subtiered systems) written since date of last inspection related to:

1. Solid radioactive waste
2. Transportation of radioactive material/waste

NOTE: The lists should indicate the significance level of each issue and the search criteria used. Please provide in document formats which are "searchable" so that the inspector can perform word searches.

G. Copies of training lesson plans for 49CFR172 subpart H, for radwaste processing, packaging, and shipping ,Transportation Security per 49 CFR 172.800

H. A summary of radioactive material and radioactive waste shipments made from date of last inspection to present. Specifically, identify receipt & shipment of 10 CFR Part 37 quantities of RAM since March 19, 2014.

I. Waste stream sample analyses results and resulting scaling factors for 2012 and 2013, or the two most recent results.

J. Waste classification reports if performed by vendors (such as for irradiated hardware)

K. A listing of all onsite radwaste/RAM storage facilities. Please include a summary *or* listing of the items stored in each facility, including the *total* amount of radioactivity and the *highest* general area dose rate. Identify specific facilities onsite where RAM or RW containing 10 CFR Part 37 quantities of licensed materials are used or stored.

Although it is not necessary to compile the following information, the inspector will also review:

L. Training, and qualifications records of personnel responsible for the conduct of radioactive waste processing, package preparation, and shipping, and security.