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

July 24, 2012

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 05000445/2012003 AND 05000446/2012003

Dear Mr. Flores:

On June 26, 2012, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Comanche Peak Nuclear Power Plant, Units 1 and 2. The enclosed integrated inspection report documents the inspection results which were discussed on June 13, 2012, with Mr. B. Mays, Vice President, Engineering and Support, and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Four NRC-identified findings of very low safety significance (Green) were identified during this inspection.

All of these findings were determined to involve violations of NRC requirements. The NRC is treating these findings as non-cited violations (NCVs), consistent with Section 2.3.2 of the Enforcement Policy.

If you contest these non-cited violations 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, D.C. 20555-0001; with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 1600 East Lamar Boulevard, Arlington, Texas, 76011-4511; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at the Comanche Peak Nuclear Power Plant.

If you disagree with a cross-cutting aspect assignment in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your

disagreement to the Regional Administrator, Region IV; and the NRC Resident Inspector at the Comanche Peak Nuclear Power Plant.

In accordance with 10 CFR 2.390 of the NRC's “Rules of Practice,” a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC’s document 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, Chief
Project Branch A
Division of Reactor Projects

Docket: 05000445; 05000446
License: NPF-87; NPF-89

Enclosure: 05000445/2012003 and 05000446/2012003
w/Attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket:	50-445, 50-446
License:	NPF-87, NPF-89
Report:	05000445/2012003 and 05000446/2012003
Licensee:	Luminant Generation Company LLC
Facility:	Comanche Peak Nuclear Power Plant, Units 1 and 2
Location:	FM-56, Glen Rose, Texas
Dates:	March 28 through June 26, 2012
Inspectors:	J. Kramer, Senior Resident Inspector B. Tindell, Resident Inspector D. Proulx, Senior Project Engineer W. Sifre, Senior Reactor Inspector N. Okonkwo, Reactor Inspector J. Dykert, Project Engineer S. Achen, Reactor Inspector
Approved By:	Wayne Walker, Chief, Project Branch A Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000445/2012003, 05000446/2012003; 3/28/2012 - 6/26/2012; Comanche Peak Nuclear Power Plant, Units 1 and 2; Operability Evaluations, Surveillance Testing, Identification and Resolution of Problems

The report covered a 3-month period of inspection by resident inspectors and announced baseline inspections by region based inspectors. Four Green non-cited violations were identified. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter 0609, "Significance Determination Process." The cross-cutting aspect is determined using Inspection Manual Chapter 0310, "Components Within the Cross-Cutting Areas." Findings for which the significance determination process does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified Findings and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, for the failure to translate tornado missile protection design requirements to a pipe stress analysis procedure. This resulted in the licensee's failure to analyze the effects of a tornado missile strike on the turbine driven auxiliary feedwater pumps' steam exhaust piping. The licensee preliminarily determined that the auxiliary feedwater system would be able to perform its safety function given a tornado missile strike. The licensee entered the finding into the corrective action program as Condition Report CR-2012-006134.

  The licensee's failure to analyze the effects of a tornado missile strike on the turbine driven auxiliary feedwater pump steam exhaust pipes was a performance deficiency. The finding was more than minor because it was associated with the protection against external events attribute of the mitigating systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee failed to ensure the reliability of the auxiliary feedwater system in response to a tornado missile hazard. Using NRC Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance because it was a qualification deficiency confirmed not to result in loss of operability or functionality. The finding did not have a cross-cutting aspect because the performance deficiency was not representative of current plant performance (Section 1R15).

- Green. The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, for the failure to incorporate acceptance limits from applicable design documents into test procedures. Specifically, the licensee revised the Unit 1 and Unit 2 requirement for the turbine driven auxiliary feedwater pump discharge pressure for a power uprate, but failed to incorporate

the change into the pump surveillance procedures. As a result, the acceptance criteria were incorrect and nonconservative. The pumps were able to meet the revised acceptance criteria and perform their safety function. The licensee entered the finding into the corrective action program as Condition Report CR-2012-006135.

The licensee's failure to update the turbine driven auxiliary feedwater surveillance procedure acceptance criteria following an accident analysis revision was a performance deficiency. The finding was more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern, in that, if the turbine driven auxiliary feedwater pump performance degraded below the accident analysis assumptions, the surveillance would not detect the inoperability and corrective actions would not be taken. Using NRC Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance in the mitigating systems cornerstone because it was not a design or qualification deficiency, was not a loss of system safety function, was not an actual loss of safety function of a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding did not have a cross-cutting aspect because the performance deficiency was not representative of current plant performance (Section 1R22).

- Green. The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for the failure of the licensee to identify and correct a condition adverse to quality. Specifically, the licensee failed to adequately evaluate industry operating experience related to fish intrusion into cooling water systems, which resulted in the failure to take appropriate corrective actions. Subsequently, shad from the safe shutdown impoundment entered the service water system and lowered cooling water flow to safety-related components when the fish were caught in the component strainers. The licensee entered the finding into the corrective action program as Condition Report CR-2012-006133.

  The licensee's failure to identify a condition adverse to quality through an inadequate evaluation of industry operating experience related to fish intrusion into cooling water systems was a performance deficiency. The finding was more than minor because it was associated with the protection against external events attribute of the mitigating systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the fish intrusion resulted in the clogging of strainers and the lowering of service water flow to safety-related pumps. Using NRC Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance because it was not a design or qualification deficiency, was not a loss of system safety function, was not an actual loss of safety function of a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding did not have a

cross-cutting aspect because the performance deficiency was not representative of current plant performance (Section 4OA2.3).

- Green. The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for the failure to identify and correct a condition adverse to quality. Specifically, safety chiller 2-06 tripped twice, but the licensee failed to develop corrective actions or provide any justification for not taking corrective actions. The licensee entered the finding into the corrective action program as Condition Report CR-2012-006136.

  The licensee's failure to identify and correct a condition adverse to quality related to two safety chiller trips was a performance deficiency. The finding was more than minor because it was associated with the equipment performance attribute of the mitigating systems cornerstone and adversely affected the cornerstone objective to ensure the availability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the safety chillers are unavailable while they are tripped. Using NRC Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance because it was not a design or qualification deficiency, was not a loss of system safety function, was not an actual loss of safety function of a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding has a problem identification and resolution cross-cutting aspect associated with the corrective action program because the licensee failed to thoroughly evaluate the problem such that the resolution addresses the cause [P.1c] (Section 4OA2.3).

B. Licensee-Identified Violations

None.

REPORT DETAILS

Summary of Plant Status

Unit 1 began the inspection period at approximately 100 percent power. On April 28, 2012, operators reduced power to approximately 55 percent to repair a main feedwater pump. On April 29, 2012, the unit returned to approximately 100 percent power. On June 15, 2012, operators reduced power to approximately 95 percent to repair a feedwater heater control valve. The unit returned to approximately 100 percent power the following day and operated at approximately 100 percent power for the remainder of the inspection period.

Unit 2 began the inspection period at approximately 100 percent power. On April 2, 2012, operators shut down Unit 2 to begin a scheduled outage to perform maintenance on the primary water system. On April 5, 2012, operators performed a reactor startup and placed the unit online. On April 6, 2012, the unit reached approximately 99 percent power and operated at that power level as a result of a reduced steam generator pressure. On April 13, 2012, the unit returned to approximately 100 percent power and operated at approximately 100 percent power for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, and Emergency Preparedness

1R01 Adverse Weather Protection (71111.01)

Readiness for Impending Adverse Weather Conditions

a. Inspection Scope

The inspectors performed a walkdown of the alternate power diesel generator systems and the switchyard because their functions could be affected by severe weather that was forecast for May 12, 2012. In addition, the inspectors reviewed the licensee's preparations for the expected weather conditions and evaluated the licensee's preparations against the site's procedures. The inspectors toured the plant grounds to identify any loose debris that could become missiles during a tornado. The inspectors reviewed a sample of corrective action program items to verify that the licensee had identified adverse weather issues at an appropriate threshold and dispositioned them in accordance with station corrective action procedures.

These activities constitute completion of one readiness for impending adverse weather condition sample as defined in Inspection Procedure 71111.01-05.

b. Findings

No findings were identified.

1R04 Equipment Alignments (71111.04)

Partial Equipment Walkdowns

a. Inspection Scope

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

- April 2, 2012, Unit 2, motor driven auxiliary feedwater pumps 2-01 and 2-02 while the pumps were running for decay heat removal
- April 25, 2012, Unit 2, diesel generator 2-02 when diesel generator 2-01 was unavailable for maintenance
- May 2, 2012, Unit 2, turbine driven auxiliary feedwater pump and diesel generator 2-01 while diesel generator 2-02 was unavailable for maintenance

The inspectors selected these systems based on their risk significance relative to the reactor safety cornerstones at the time they were inspected. The inspectors focused on discrepancies that could affect the function of the system and, therefore, potentially increase risk. The inspectors reviewed applicable operating procedures, system diagrams, Final Safety Analysis Report, technical specification requirements, outstanding work orders, condition reports, and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have rendered the systems incapable of performing their intended functions. The inspectors also walked down accessible portions of the systems to verify system components and support equipment were aligned correctly and operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no obvious deficiencies. The inspectors also verified that the licensee had properly identified and resolved equipment alignment problems that could cause initiating events or impact the capability of mitigating systems or barriers and entered them into the corrective action program with the appropriate significance characterization.

These activities constitute completion of three partial system walkdown samples as defined in Inspection Procedure 71111.04-05.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05AQ)

a. Inspection Scope

The inspectors conducted fire protection walkdowns in the following risk-significant plant areas:

- May 11, 2012, Units 1 and 2, fire zones AA153 and AA154, trains A and B safety chiller rooms

- May 11, 2012, Units 1 and 2, fire zones EQ149 and ER150, trains A and B uninterruptible power supply heating, ventilation and cooling rooms
- June 9, 2012, Unit 2, fire zone EA73, train A control room ventilation room
- June 9, 2012, Unit 1, fire zone EA74, train B control room ventilation room
- June 20, 2012, Unit 1, fire zone 1SE18, 852 foot switchgear
- June 20, 2012, Unit 2, fire zone 2SB4, 790 foot corridor

The inspectors reviewed areas to assess if licensee personnel had implemented a fire protection program that adequately controlled combustibles and ignition sources within the plant; effectively maintained fire detection and suppression capability; maintained passive fire protection features in good material condition; and had implemented adequate compensatory measures for out of service, degraded or inoperable fire protection equipment, systems, or features, in accordance with the licensee's fire plan. The inspectors selected fire areas based on their overall contribution to internal fire risk as documented in the plant's individual plant examination of external events, their potential to affect equipment that could initiate or mitigate a plant transient, or their impact on the plant's ability to respond to a security event. The inspectors verified that fire hoses and extinguishers were in their designated locations and available for immediate use, that fire detectors and sprinklers were unobstructed, that transient material loading was within the analyzed limits, and fire doors, dampers, and penetration seals appeared to be in satisfactory condition.

These activities constitute completion of six quarterly fire protection inspection samples as defined in Inspection Procedure 71111.05-05.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program (71111.11)

.1 Quarterly Inspection of Licensed Operator Requalification Program (71111.11Q)

a. Inspection Scope

On April 27, 2012, the inspectors observed a crew of licensed operators in the plant's simulator perform just-in-time training prior to the Unit 1 down power. The inspectors assessed the following areas:

- Licensed operator performance
- The ability of the licensee to administer the evaluations
- The modeling and performance of the control room simulator
- The quality of post-scenario critiques
- Follow-up actions taken by the licensee for identified discrepancies

These activities constitute completion of one quarterly inspection of licensed operator requalification program sample as defined in Inspection Procedure 71111.11-05.

b. Findings

No findings were identified.

.2 Quarterly Observation of Licensed Operator Performance (71111.11Q)

a. Inspection Scope

On April 5, 2012, the inspectors observed the performance of on-shift licensed operators in the plant's main control room during the Unit 2 power increase and turbine roll. At the time of the observations, the plant was in a period of heightened activity. In addition, the inspectors assessed the operators' adherence to plant procedures and other operations department policies.

These activities constitute completion of one quarterly observation of licensed operator performance sample as defined in Inspection Procedure 71111.11-05.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors evaluated the following risk significant systems, components, and degraded performance issues:

- 6.9 kV breakers
- 480 V motor control center unavailability

The inspectors reviewed events where ineffective equipment maintenance had resulted in failures and independently verified the licensee's actions to address system performance or condition problems in terms of the following:

- Implementing appropriate work practices
- Identifying and addressing common cause failures
- Scoping of systems in accordance with 10 CFR 50.65(b)
- Characterizing system reliability issues for performance
- Charging unavailability for performance
- Trending key parameters for condition monitoring
- Ensuring proper classification in accordance with 10 CFR 50.65(a)(1) or (a)(2)

The inspectors verified appropriate performance criteria for structures, systems, and components classified as having an adequate demonstration of performance through preventive maintenance, as described in 10 CFR 50.65(a)(2), or as requiring the establishment of appropriate and adequate goals and corrective actions for systems classified as not having adequate performance, as described in 10 CFR 50.65(a)(1). The inspectors assessed performance issues with respect to the reliability, availability, and condition monitoring of the system. In addition, the inspectors verified that maintenance effectiveness issues were entered into the corrective action program with

the appropriate significance characterization. Specific documents reviewed during this inspection are listed in the attachment.

These activities constituted completion of two maintenance effectiveness samples as defined in Inspection Procedure 71111.12-05.

b. Findings

No findings were identified.

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

a. Inspection Scope

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

- March 29, 2012, Unit 2 mid-cycle outage
- April 26, 2012, Unit 2, train A residual heat removal pump, turbine driven auxiliary feedwater pump, and train A control room air conditioning unit out of service
- May 2, 2012, Unit 2, train B diesel generator out of service
- May 8, 2012, Unit 1, train B component cooling water out of service during severe weather
- June 18, 2012, walkdown of protected electrical systems while transformer 2ST was out of service for switchyard breaker work
- June 21, 2012, Unit 2, (emergent work) diesel generator 2-01 out of service because of mechanical governor failure

The inspectors selected these activities based on potential risk significance relative to the reactor safety cornerstones. As applicable for each activity, the inspectors verified that licensee personnel performed risk assessments as required by 10 CFR 50.65(a)(4) and that the assessments were accurate and complete. When licensee personnel performed emergent work, the inspectors verified that the licensee personnel promptly assessed and managed plant risk. The inspectors reviewed the scope of maintenance work, discussed the results of the assessment with the licensee's probabilistic risk analyst or shift technical advisor, and verified plant conditions were consistent with the risk assessment. The inspectors also reviewed the technical specification requirements and inspected portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met.

These activities constitute completion of six maintenance risk assessments and emergent work control inspection samples as defined in Inspection Procedure 71111.13-05.

b. Findings

No findings were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed the following issues:

- CR-2011-000356, Unit 1, channel 1 under-voltage relay chatter for reactor coolant pump 1-01
- CR-2011-013000, Units 1 and 2, turbine driven auxiliary feedwater pump steam exhaust missile protection
- CR-2012-001014, Unit 1, safety injection pump 1-01 overcurrent relay setpoints out of tolerance
- CR-2012-002492, Unit 1, regenerative heat exchanger tube leak
- CR-2012-004257, Unit 2, diesel generator 2-01 voltage regulator system trouble
- CR-2012-005303, Unit 1, installation of cables not physically separated from halogenated cable when installed in a cable tray

The inspectors selected these potential operability issues based on the risk-significance of the associated components and systems. The inspectors evaluated the technical adequacy of the evaluations to ensure that technical specification operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the technical specifications and Final Safety Analysis Report to the licensee's evaluations to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluations. Additionally, the inspectors reviewed a sampling of corrective action documents to verify that the licensee was identifying and correcting any deficiencies associated with operability evaluations. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of six operability evaluation inspection samples as defined in Inspection Procedure 71111.15-05.

b. Findings

Introduction. The inspectors identified a Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, for the failure to translate tornado missile protection design requirements to a pipe stress analysis procedure. This resulted in the licensee's failure to analyze the effects of a tornado missile strike on the turbine driven auxiliary feedwater pumps' steam exhaust piping. The licensee preliminarily determined that the auxiliary

feedwater system would be able to perform its safety function given a tornado missile strike.

Description. The inspectors performed a walkdown of the building roofs to identify equipment vulnerable to tornado missiles. The inspectors noted that the turbine driven auxiliary feedwater pump steam exhaust pipe for both units was exposed to tornado generated missile hazards. The licensee searched for the evaluation of a tornado generated missile strike on the pipe and determined that Procedure 2EP-5.13, "Design Guidelines for Pipe Stress and Pipe Supports," Revision 0, stated, in part, that the stress problem related to the exhaust pipe need not be evaluated for tornado missile loading because the auxiliary feedwater system is designed with sufficient redundancy. The inspectors determined that Procedure 2EP-5.13 was inadequate and a stress analysis of the exhaust piping was required because the design basis required the plant to protect the auxiliary feedwater system from damage from tornado missiles.

The inspectors determined that, in the design bases event, a tornado would cause a loss of offsite power and result in the start of the turbine driven auxiliary feedwater pump. The inspectors were concerned that if the exhaust pipe completely crimped due to a worst case tornado missile strike, the pipe would likely rupture because it would be subjected to a steam pressure significantly above its design pressure when steam flow stopped. This could potentially fail a train of the motor driven auxiliary feedwater pumps because the exhaust pipe is routed through both trains of safety-related switchgear rooms prior to exiting the roof. However, the licensee preliminarily determined that the exhaust pipe would either shear off or not completely crimp, which would not affect the safety function of the turbine driven or motor driven pumps.

The inspectors determined that Procedure 2EP-5.13 was last revised in 1990 and therefore, the cause of the inadequate procedure is not representative of current plant performance.

Analysis. The licensee's failure to analyze the effects of a tornado missile strike on the turbine driven auxiliary feedwater pumps' steam exhaust piping was a performance deficiency. The finding was more than minor because it was associated with the protection against external events attribute of the mitigating systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee failed to ensure the reliability of the auxiliary feedwater system in response to a tornado missile hazard. Using NRC Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance because it was a qualification deficiency confirmed not to result in loss of operability or functionality. The finding did not have a cross-cutting aspect because the performance deficiency was not representative of current plant performance.

Enforcement. Title 10 CFR Part 50, Appendix B, Criterion III, requires, in part, that measures shall be established to assure that applicable design bases is correctly translated into procedures. The Final Safety Analysis Report, Amendment 104, Section 3.1.1.2, "Design Bases for Protection Against Natural Phenomena," states, in part, that components important to safety shall be designed to withstand the effects of natural phenomena such as tornadoes without the loss of capability to perform their safety function. Contrary to the above, as of June 13, 2012, the licensee failed to assure that

the design bases information for the auxiliary feedwater exhaust stack was correctly translated into procedure 2EP-5.13, Appendix A, “Guideline for Analysis of Wind/Tornado Loads,” Revision 0. Specifically, the licensee procedure did not require analysis of the turbine driven auxiliary feedwater steam exhaust pipes for tornado generated missile strikes to ensure that the turbine and motor driven auxiliary feedwater pumps remained operable. Because this violation was of very low safety significance and was entered into the licensee’s corrective action program as Condition Report CR-2012-006134, it is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy: NCV 05000445/2012003-01; 05000446/2012003-02, “Failure to Analyze Tornado Missile Strike on Turbine Driven Auxiliary Feedwater Exhaust Pipe.”

1R17 Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications (71111.17)

.1 Evaluations of Changes, Tests, or Experiments

a. Inspection Scope

The inspectors reviewed nine evaluations to determine whether the changes to the facility or procedures, as described in the final safety analysis report, had been reviewed and documented in accordance with 10 CFR 50.59 requirements. The inspectors verified that, when changes, tests, or experiments were made, evaluations were performed in accordance with 10 CFR 50.59 and licensee personnel had appropriately concluded that the change, test or experiment could be accomplished without obtaining a license amendment. The inspectors also verified that safety issues related to the changes, tests, or experiments were resolved. The team compared the safety evaluations and supporting documents to the guidance and methods provided in Nuclear Energy Institute 96-07, "Guidelines for 10 CFR 50.59 Implementation," as endorsed by NRC Regulatory Guide 1.187,” “Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments," to determine the adequacy of the safety evaluations.

The inspectors reviewed 27 samples of changes, tests, and experiments that licensee personnel determined did not require evaluations and verified that the licensee personnel’s conclusions were correct and consistent with 10 CFR 50.59.

The inspectors also verified that calculations, analyses, design change documentation, procedures, the final safety analysis report, the technical specifications, and plant drawings used to support the changes were accurate after the changes had been made. Documents reviewed are listed in the attachment.

These activities constitute completion of nine samples of evaluations and 27 samples of changes, tests, and experiments that were screened out by licensee personnel as defined in Inspection Procedure 71111.17-04.

b. Findings

No findings were identified.

.2 Permanent Plant Modifications

a. Inspection Scope

The inspectors verified that calculations, analyses, design change documentation, procedures, the final safety analysis report, the technical specifications, and plant drawings used to support the modifications were accurate after the modifications had been made. The inspectors verified that modifications were consistent with the plant's licensing and design bases. The inspectors confirmed that revised calculations and analyses demonstrated that the modifications did not adversely impact plant safety. Inspectors interviewed design and system engineers to assess the adequacy of the modifications. The inspectors reviewed twelve permanent plant modifications, and specific documents reviewed during this inspection are listed in the attachment.

1. Modification of the Floats to Permanently Secure them to the Units 1 and 2 Condensate Storage Tank Diaphragm.

The inspectors reviewed final design authorization FDA-2010-000122-01-00 implemented to address a potential problem associated with the design of the floats attached to the diaphragm contained in the condensate storage tanks. This modification replaced the polyethylene block inside the three sided elastomer sleeve with a polyethylene block that is encased in a thermoplastic elastomer of the same material as the diaphragm. This design change enabled the licensee to apply heat to the top side of the float sleeve and the elastomer encased block until the material is pliable, then rolled together with a roller carefully to ensure a good bonding. This modification was implemented to prevent the floats from detaching from the diaphragm and allowing the diaphragm to sink into the tank and possibly affecting the ability to draw water from the tank. The inspectors reviewed the material specifications and design documents associated with this modification.

2. Revision of Design Basis Documents for Prevention of Steam Voiding in Residual Heat Removal Systems During Shutdown Cooling Evolutions

The inspectors reviewed final design authorization FDA-2011-000063 implemented to revise the design reference operating temperature limits of the residual heat removal system for emergency core cooling system alignment during Mode 4 operation. This modification was made in response to Information Notice 2010-11, "Potential for Steam Voiding Causing Residual Heat Removal System Inoperability." During Mode 4 operation, the reactor coolant saturation temperature could be exceeded in the residual heat removal system because of previously unanalyzed hydraulic losses due to emergency core cooling system flow when the suction is switched from the reactor coolant system hot leg to the refueling water storage tank combined with safety injection and containment spray pump flow. The licensee's design change prohibited dual train residual heat removal operation in Mode 4, included an updated calculation that applies in Mode 4, and provided the most limiting temperature allowed for the residual heat removal system piping and heat exchanger that is verified to be ready for emergency core cooling system injection.

3. Localized Corrosion Found Below Minimum Wall Thickness on the Shell of the Evaporative Heat Exchanger on Safety Chiller 2-05

The inspectors reviewed final design authorization FDA-2011-000064 which evaluated

localized corrosion on the shell of the evaporative heat exchanger on safety chiller 2-05. The safety chill water system removes heat dissipated from the engineered safety feature pump motors and maintains the temperature of the electrical switchgear rooms below 122 degrees Fahrenheit. The evaporative heat exchanger employs component cooling water on its shell side. The localized pitting was found to be approximately 1/8 by 1/4 inch in size and 1/10 inch deep. The nominal wall thickness of the evaporator shell is 3/10 inch and the calculated necessary minimum wall thickness to protect from rupture is 6/100 inch. The inspectors reviewed the corrosion rate calculations employed to estimate a remaining wall life of beyond 30 years, and a preventative maintenance inspection schedule was established to document the corrosion rate and wall thickness of the chiller shell.

4. Engineering Basis for Using a Diesel Generator Turbocharger Bearing Journal Shaft that is out of Allowed Tolerance

The inspectors reviewed a final design authorization FDA-2011-000178 which incorporated a vendor input for shaft tolerance into the licensee's engineering basis. A use-as-is recommendation was made for the rotor shaft from the turbine end to the blower end on the Unit 1 diesel generator 1-02 turbocharger. The shaft diameter was found to be greater than the vendor clearance by 0.003 inch at the turbine end journal and by 0.001 inch at the blower end journal. The running clearance between the bearings and rotor shaft is still within specification and less than five percent undersize. The turbocharger shaft was part of the original installation on the diesel generator and has had no major operational issues. The licensee further determined that the components have shown no signs of scoring or heat damage.

5. Replace Westinghouse Universal Logic Boards with Complex Programmable Logic Device in Train B Solid State Protection System Cabinet TCX-ESELSP-01

The inspectors reviewed final design authorizations FDA-2005-002203-02 and 2005-002203-04 that replaced the following boards in the Train B solid state protection system cabinet TCX-ESELSP-01:

- forty universal logic boards model 6056D21G01 with model 6D30225G01
- five safeguard driver boards model 6069D15G01 with model 6D30252G02
- one under voltage driver board model 6058D45G01 with model 6D30350G01
- one semi-automatic tester board model 6056D33G01 with model 6D30520G01

The old boards were obsolete and no longer available from the vendor (Westinghouse). The solid state logic protection system takes binary inputs (voltage/no voltage) from the process and nuclear instrument channels corresponding to conditions (normal/abnormal) of plant parameters. The system combines these signals in the required logic combination and generates a trip signal (no voltage) to the undervoltage coils of the reactor trip circuit breakers when the necessary combinations of signals occur. The system also provides annunciator, status light, and computer input signals which indicate the condition of bistable input signals, partial trip and full trip functions, and the status of the various blocking, permissive, and actuation functions. The modification is a vendor recommendation and design. It is designed as a one-for-one and board-for-board replacement of the original equipment. The inspectors reviewed applicable drawings, logic diagrams and vendor document. The inspectors also reviewed the evaluations and

operator procedures for surveillances and alarm responses to ensure design implementation have been incorporated.

6. Provide a Temporary Jumper between Cell 38 and 40 of Battery CP1-EPBTND-07, when Damaged Cell 39 was Removed from Service

The Inspectors reviewed final design authorization FDA-2008-002132 implemented to temporarily jumper between cells 38 and 40 of battery CP1-EPBTND-07, when the damaged cell 39 was removed from service. The inspectors reviewed the drawings and work orders associated with the jumper installations. While performing work orders 3527625 and 3477801, the licensee found that electrolyte level of cell 39 in battery CP1-EPBTND-07 was low and the jar appeared to have cracked. Engineering decided to remove the degraded cell 39 and jumper the adjacent cells for full battery functionality. The design function of the battery is to provide power to the DC emergency lighting system in the event power to the AC essential lighting system is lost. The inspectors reviewed battery calculations and evaluations to ensure operability of the battery at the time of the modification. The inspectors determined, from the calculations, that there was sufficient margin to support operability of the modified battery with 59 cells instead of the original 60 cells.

7. Provide Justification for Installation of a Permanent Clamp to Fix Instrument Air Solder Connection Leaks

The inspectors reviewed final design authorization FDA-2008-001060-01-00 implemented to provide justification for installation of a permanent clamp to fix instrument air solder connection leaks. The modification installed the specified clamp over the leaking solder connection. The clamp was then tightened until leak was stopped. After 20 minutes, the connection was inspected to ensure appropriate tightening for stoppage of the leaks. This allowed for gasket compression to set. The inspectors reviewed procedure CPES-M-1078 to ensure that procedure was revised to allow for repair of solder pipe joint leaks by the installation of a clamp specifically designed for copper solder joint leaks. This process was only applicable for the nonsafety-related instrument air system. For installation of the clamp on a 4, 3, or 2 inch copper tube solder joints, it was required that engineering sign off in the work order to document their review for possible drawing revision. The instrument air system is required to supply air of adequate pressure and capacity to maintain operation of all plant valves, dampers, instruments and other devices in all modes of plant operation. The supplied air is required to be maintained adequately clear of particulates, oil, and moisture so as to supply air for use as breathing air which meets the requirements of Grade “D” quality per ANSI Z86.1-1973. Air supplied to the system for distribution to end-user instruments is required to be maintained free of oil with a hydrocarbon and particulate matter content consistent with the requirements of the end users.

8. Provide the Process for Revision of the Containment Isolation System, Safety Injection System, and the Residual Heat Removal System Design Basis Documents to Address response to the Generic Letter 2008-01,”Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems

The Inspectors reviewed final design authorization FDA 2008-003459-07 implemented to provide the process for the revision of the containment isolation system, safety injection system, and the residual heat removal system design basis documents to address the licensee’s response as documented in Letter CP-200801260/TXX-08120 and

commitment 3618672 made to the NRC concerning Generic Letter 2008-01, "Gas Accumulation in Emergency Core Cooling System, Residual Heat Removal, and Containment Spray Systems." The NRC issued Generic Letter 2008-01 and requested that each addressee evaluate its systems licensing basis, design, testing, and corrective actions to ensure that gas accumulation is maintained less than the amount that challenges operability of these systems, and that appropriate action is taken when conditions adverse to quality are identified. In response, the licensee, through commitment letter 3618672, committed to the installation of vent valves and pressure gauges. FDA-2008-0003459 evaluated the Generic Letter 2008-01 and recommended corrective actions. This modification revised some sections of design basis documents, DBD-ME-013 for containment isolation system, DBD-ME-260 for residual heat removal, and DBD-ME-261 for safety injection system to address pressure transmitters installed in both Units 1 and 2 based on the licensee response to Generic Letter 2008-01. The inspectors reviewed LDCR SA-2009-012 and EVAL-2008-003459-01 for updates to the affected final safety analysis report sections to describe changes made to the facility.

9. Revise Specification ES-100 to Address Acceptable Methods of Bonding for Sections of Buried Metallic Piping

The inspectors reviewed final design authorization FDA-2009-002617-01-00 implemented to revise Specification ES-100 to address acceptable methods of bonding for sections of buried metallic piping. The inspectors reviewed the corrective action document SMF-2009-002617-00 that initiated the changes, the design document that implemented the specification changes, and the associated 50.59 screening. The inspectors reviewed the specification and the affected sections. The modification revised the specification ES-100 for bonding methodology for buried metallic piping to incorporate exothermic welding as the preferred method of metallic bonding. Specification ES-100, section 3.10.33 provides the bonding methodology for buried metallic piping. It stated that buried metallic piping whose sections are connected by a method other than welding shall be either bonded across to provide electrical continuity or encased in concrete as shown on the engineers' drawings. The current method of bonding incorporates attaching mechanical ground clamps. Although acceptable, the preferred method for ensuring a durable bond and electrical continuity is exothermic (Cadweld) welding, as described in "Control of Pipeline Corrosion, 2nd Edition" (A.W. Peabody, 2001, NACE International). Specification ES-100 was therefore revised to clarify the use of exothermic (Cadweld) welding as the preferred method of metallic bonding for buried piping when allowable by piping section.

10. Remove 345 kV Transmission Line Breaker Controls from the Main Control Board CB12 to Allow Oncor Transmission System Provider Modifications

The inspectors reviewed final design authorization FDA-2010-000125-02 implemented to remove 345 kV line breakers controls from the control room. This modification removed, from main control board CB12, the 345 kV transmission line breaker controls and indication owned by the transmission system provider to allow the transmission system provider to perform modifications and to reflect changes to licensee documents. In the future, the indication of circuit breaker status will have to be obtained via grid controller or computer points. The inspectors walked down the modified control board and reviewed associated drawings and screenings to ensure that appropriate evaluations were implemented. The switchyards (both 138 kV and 345 kV) are considered to be the design and installation responsibility of the transmission system provider. With this

modification, the control room actions during a loss of offsite power event will be focused on the reactor safety and transmission system provider responsibilities will be moved to the provider facility (345 kV control building) where local control may be taken.

11. Replace Reactor Head Vent Valve.

The inspectors reviewed final design authorization FDA-2010-000045-01-00 implemented to repair the Unit 1 reactor vessel head vent valve, 1-HV-3607. The repair involved replacement of the valve body only with reinstallation of the original solenoid actuator. The original valve was ASME Class 1 and the replacement valve was ASME Class 2. The inspectors reviewed the design specifications for the replacement valve and verified that they were the same as the original valve. The inspectors also reviewed the original valve specifications as documented in Westinghouse specification G-955186, Revision 1. The inspectors determined that the original specification was for at least an ASME Class 2 valve body. The inspectors verified that the replacement valve satisfied the original design specification.

12. Revise DBD-CS-018 to Add Analysis Requirements for Manual Valves with Stem Extensions.

The inspectors reviewed final design authorization FDA-2006-002873-01-00; implemented to update the design basis documents for the installation of extensions to manual valves. This modification provided analyses for valve stem extensions used in the plant. The evaluations were performed to assure that the installations were in accordance with Regulatory Guide 1.28, “Quality Assurance Program Requirements” and applicable ASME codes. The inspectors reviewed the design requirements for the containment spray valve extensions. The inspectors performed walkdowns of the valves and verified that the installations were consistent with the documented design. The inspectors also reviewed the material and seismic qualifications for the valve stem extensions.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed the following post-maintenance activities to verify that procedures and test activities were adequate to ensure system operability and functional capability:

- April 25, 2012, Unit 2, diesel generator 2-01 testing following voltage regulator maintenance
- April 26, 2012, Unit 2, turbine driven auxiliary feedwater pump flow control valve testing following valve maintenance
- May 8, 2012, Unit 2, diesel generator 2-02 testing following jacket water heat exchanger cleaning

- May 8, 2012, Unit 1, component cooling water pump 1-02 testing following mechanical seal replacement

- June 22, 2012, Unit 2, diesel generator 2-01 isochronous and load reject testing following mechanical governor replacement

The inspectors selected these activities based upon the structure, system, or component's ability to affect risk. The inspectors evaluated the activities to ensure the testing was adequate for the maintenance performed, the acceptance criteria were clear, and the test ensured equipment operational readiness.

The inspectors evaluated the activities against technical specifications, the final safety analysis report, 10 CFR Part 50 requirements, licensee procedures, and various NRC generic communications to ensure that the test results adequately ensured that the equipment met the licensing basis and design requirements. In addition, the inspectors reviewed corrective action documents associated with post-maintenance tests to determine whether the licensee was identifying problems and entering them into the corrective action program and that the problems were being corrected commensurate with their importance to safety. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of five post-maintenance testing inspection samples as defined in Inspection Procedure 71111.19-05.

b. Findings

No findings were identified.

1R20 Refueling and Other Outage Activities (71111.20)

a. Inspection Scope

The inspectors reviewed the outage safety plan and contingency plans for the Unit 2 maintenance outage to repair the primary water system, conducted April 2 through April 5, 2012, to confirm that licensee personnel had appropriately considered risk, industry experience, and previous site-specific problems in developing and implementing a plan that assured maintenance of defense-in-depth. During the outage, the inspectors observed portions of the shutdown preparations and plant startup and monitored licensee controls over the outage activities listed below:

- Configuration management, including maintenance of defense-in-depth, is commensurate with the outage safety plan for key safety functions and compliance with the applicable technical specifications when taking equipment out of service

- Clearance activities, including confirmation that tags were properly hung and equipment appropriately configured to safely support the work or testing

- Status and configuration of electrical systems to ensure that technical specifications and outage safety plan requirements were met, and controls over switchyard activities

- Monitoring of decay heat removal processes, systems, and components
- Controls over activities that could affect reactivity
- Startup and ascension to full power operation, tracking of startup prerequisites, walkdown of the containment to verify that debris had not been left which could block emergency core cooling system suction strainers
- Licensee identification and resolution of problems related to outage activities
- Licensee's management of fatigue

These activities constitute completion of one refueling and other outage activities sample as defined in Inspection Procedure 71111.20-05.

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors reviewed the Final Safety Analysis Report, procedure requirements, technical specifications, and corrective action documents to ensure that the surveillance activities listed below demonstrated that the systems, structures, and components tested were capable of performing their intended safety functions:

Pump or Valve Inservice Test

- April 19, 2012, Unit 2 turbine driven auxiliary feedwater pump test in accordance with Procedure OPT-206B, "AFW System," Revision 20, Procedure Change Number 14

Routine Surveillance Testing

- March 29, 2012, Unit 1 turbine driven auxiliary feedwater pump test in accordance with Procedure OPT-206A, "AFW System," Revision 28
- April 11, 2012, Unit 1 spray additive system test in accordance with Procedure OPT-226A, "Containment Spray Additive System Test," Revision 3
- June 26, 2012, Unit 2 alternate power diesel generators
- June 22, 2012, Unit 2 diesel generator 2-01 fast start test in accordance with Procedure OPT-214B, "Diesel Generator Operability Test," Revision 14

The inspectors either witnessed or reviewed test data to verify that the significant surveillance test attributes were adequate to address the following:

- Preconditioning
- Evaluation of testing impact on the plant

- Acceptance criteria
- Test equipment
- Procedures
- Jumper and lifted lead controls
- Test data
- Testing frequency and method demonstrated technical specification operability
- Test equipment removal
- Restoration of plant systems
- Fulfillment of ASME code requirements
- Updating of performance indicator data
- Reference setting data
- Annunciators and alarms setpoints

Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of five surveillance testing inspection samples (one pump or valve inservice test sample, and four routine surveillance testing samples) as defined in Inspection Procedure 71111.22-05.

b. Findings

Introduction. The inspectors identified a Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, for the failure to incorporate acceptance limits from applicable design documents into test procedures. Specifically, the licensee revised the Unit 1 and Unit 2 requirement for the turbine driven auxiliary feedwater pump discharge pressure for a power uprate, but failed to incorporate the change into the pump surveillance procedures. As a result, the acceptance criteria were incorrect and nonconservative. The pumps were able to meet the revised acceptance criteria and perform their safety function.

Description. The inspectors observed Unit 1 and Unit 2 turbine driven auxiliary feedwater pump surveillances performed in accordance with Procedures OPT-206A, “AFW System,” Revision 28 and OPT-206B, “AFW System,” Revision 20. The inspectors questioned whether the accident analysis assumptions were met since pump recirculation flow was not measured during the test. In answering the inspectors question, the licensee discovered that the procedure acceptance criteria for pump discharge pressure was not updated when the accident analysis was revised for Unit 1 and Unit 2 power up-rates in 2008 and 2009 respectively. The licensee initiated Condition Report CR-2012-002280 and updated the procedures.

The inspectors reviewed previous surveillance tests results for the turbine driven auxiliary feedwater pumps. The inspectors determined that the pump discharge pressures met the revised acceptance criteria and would perform their safety function.

The inspectors determined that the licensee’s error originally occurred in 2008 and is not representative of current performance due to changes in the modification process.

Analysis. The licensee’s failure to update the turbine driven auxiliary feedwater surveillance procedure acceptance criteria following an analysis revision for a power uprate was a performance deficiency. The finding was more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern, in

that, if the turbine driven auxiliary feedwater pump performance degraded below the analysis assumptions, the surveillance would not detect the inoperability and corrective actions would not be taken. Using NRC Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance in the mitigating systems cornerstone because it was not a design or qualification deficiency, was not a loss of system safety function, was not an actual loss of safety function of a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding did not have a cross-cutting aspect because the performance deficiency was not representative of current plant performance.

Enforcement. Title 10 CFR Part 50, Appendix B, Criterion XI, states, in part, that written test procedures shall incorporate the acceptance limits contained in applicable design documents. Contrary to the above, from 2008 to April 4, 2012, Unit 1 Procedure OPT-206A-6, "Turbine Driven Auxiliary Feedwater Pump 1-01 Test Data Sheet," Revision 30, and from 2009 to April 4, 2012, Unit 2 Procedure OPT-206B-6, "Turbine Driven Auxiliary Feedwater Pump 2-01 Test Data Sheet," Revision 27, failed to incorporate acceptance limits contained in applicable design documents in written test procedures. Specifically, the licensee failed to incorporate analyses revisions for the turbine driven auxiliary feedwater pump discharge pressure requirements into the pump surveillance procedures. The licensee initiated Condition Report CR-2012-006135 and updated the procedures. Because this violation was of very low safety significance and was entered into the licensee's corrective action program, it is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy: NCV 05000445/2012003-02; 05000446/2012003-02, "Failure to Revise Turbine Driven Auxiliary Feedwater Pump Acceptance Criteria."

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

On June 5, 2012, the inspectors evaluated the conduct of licensee emergency drills to identify any weaknesses and deficiencies in classification, notification, and protective action recommendation development activities. The inspectors observed emergency response operations in the simulator and the technical support center to determine whether the event classification, notifications, and protective action recommendations were performed in accordance with procedures. The inspectors also compared any inspector-observed weakness with those identified by the licensee staff in order to evaluate the critique and to verify whether the licensee staff was properly identifying weaknesses and entering them into the corrective action program.

These activities constituted completion of one drill/training evolution sample as defined in Inspection Procedure 71114.06-05.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

.1 Data Submission Issue

a. Inspection Scope

The inspectors performed a review of the data submitted by the licensee for the third quarter 2011 performance indicators for any obvious inconsistencies prior to its public release in accordance with NRC Inspection Manual Chapter 0608, “Performance Indicator Program.”

This review was performed as part of the inspectors’ normal plant status activities and, as such, did not constitute a separate inspection sample.

b. Findings

No findings were identified.

.2 Reactor Coolant System Leakage (BI02)

a. Inspection Scope

The inspectors sampled licensee submittals for the reactor coolant system leakage performance indicator for Units 1 and 2 for the period from the second quarter 2011 through the first quarter 2012. To determine the accuracy of the performance indicator data reported during those periods, performance indicator definitions and guidance contained in Nuclear Energy Institute Document 99-02, “Regulatory Assessment Performance Indicator Guideline,” Revision 6, was used. The inspectors reviewed the licensee’s operator logs, reactor coolant system leakage tracking data, condition reports, and NRC integrated inspection reports to validate the accuracy of the submittals. The inspectors also reviewed the licensee’s condition report database to determine if any problems had been identified with the performance indicator data collected or transmitted for this indicator.

These activities constitute completion of two reactor coolant system leakage samples as defined by Inspection Procedure 71151-05.

b. Findings

No findings were identified.

.3 Safety System Functional Failures (MS05)

a. Inspection Scope

The inspectors sampled licensee submittals for the safety system functional failures performance indicator for Units 1 and 2 for the period from the second quarter 2011 through the first quarter 2012. To determine the accuracy of the performance indicator data reported during those periods, performance indicator definitions and guidance contained in Nuclear Energy Institute Document 99-02, “Regulatory Assessment Performance Indicator Guideline,” Revision 6, and NUREG-1022, “Event Reporting

Guidelines 10 CFR 50.72 and 50.73," definitions and guidance were used. The inspectors reviewed the licensee's operator narrative logs, operability assessments, maintenance rule records, maintenance work orders, condition reports, and NRC integrated inspection reports to validate the accuracy of the submittals. The inspectors also reviewed the licensee's condition report database to determine if any problems had been identified with the performance indicator data collected or transmitted for this indicator and none were identified. Specific documents reviewed are described in the attachment to this report.

These activities constitute completion of two safety system functional failures samples as defined by Inspection Procedure 71151-05.

b. Findings

No findings were identified.

4OA2 Identification and Resolution of Problems (71152)

.1 Routine Review of Identification and Resolution of Problems

a. Inspection Scope

As part of the various baseline inspection procedures discussed in previous sections of this report, the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that they were being entered into the licensee's corrective action program at an appropriate threshold, that adequate attention was being given to timely corrective actions, and that adverse trends were identified and addressed. The inspectors reviewed attributes that included: the complete and accurate identification of the problem; the timely correction, commensurate with the safety significance; the evaluation and disposition of performance issues, generic implications, common causes, contributing factors, root causes, extent of condition reviews, and previous occurrences reviews; and the classification, prioritization, focus, and timeliness of corrective actions. Minor issues entered into the licensee's corrective action program because of the inspectors' observations are included in the attached list of documents reviewed.

These routine reviews for the identification and resolution of problems did not constitute any additional inspection samples. Instead, by procedure, they were considered an integral part of the inspections performed during the quarter and documented in Section 1 of this report.

b. Findings

No findings were identified.

.2 Daily Corrective Action Program Reviews

a. Inspection Scope

In order to assist with the identification of repetitive equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of

items entered into the licensee's corrective action program. The inspectors accomplished this through review of the station's daily corrective action documents.

The inspectors performed these daily reviews as part of their daily plant status monitoring activities, so these reviews did not constitute any separate inspection samples.

b. Findings

No findings were identified.

.3 Selected Issue Follow-up Inspection

a. Inspection Scope

During a review of items entered in the licensee's corrective action program, the inspectors recognized corrective action items associated with the fish intrusion into the service water system. In addition, the inspectors recognized corrective action items associated with the safety chiller compressors tripping. The inspectors reviewed documents and interviewed personnel to determine if the licensee completely and accurately identified problems in a timely manner commensurate with its significance, evaluated and dispositioned operability issues, considered the extent of condition, prioritized the problem commensurate with its safety significance, and completed corrective actions in a timely manner commensurate with the safety significance of the issue.

These activities constitute completion of two in-depth problem identification and resolution samples as defined in Inspection Procedure 71152-05.

b. Findings

1. Failure to Adequately Evaluate Fish Intrusion Operating Experience and Initiate Corrective Action

Introduction. The inspectors identified a Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for the failure of the licensee to identify and correct a condition adverse to quality. Specifically, the licensee failed to adequately evaluate industry operating experience related to fish intrusion into cooling water systems, which resulted in the failure to take appropriate corrective actions. Subsequently, shad from the safe shutdown impoundment entered the service water system and lowered cooling water flow to safety-related components when the fish were caught in the component strainers.

Description. On March 30 through March 31, 2011, the licensee responded to alarms for low cooling flow from service water to the Unit 2 safety injection pump 2-02, Unit 1 centrifugal charging pump 1-02, and Unit 1 containment spray pumps 1-01 and 1-03. The licensee removed the systems from service to clean the service water strainers to the pumps and discovered numerous small shad in the strainers.

The inspectors performed a walkdown of the service water intake structure and observed a large number of dead shad in the safe shutdown impoundment. The inspectors discussed the observation with the licensee and determined that the most

likely cause of the shad die-off was the result of a turnover. A turnover is a condition where low dissolved oxygen water below a thermocline rises to the surface and overwhelms the shad. This natural phenomenon is common on large bodies of water and had occurred in the safe shutdown impoundment and in the Squaw Creek Reservoir in the past.

The inspectors reviewed Condition Report CR-2007-003448, which documented industry operating experience of fish intrusion into cooling water systems. The licensee acknowledged, in the evaluation, that fish were present in the safe shutdown impoundment. However, the inspectors identified that the licensee failed to evaluate if the units were vulnerable to the same or similar events described in the operating experience and did not initiate corrective action to prevent or reduce the units' susceptibility to a fish intrusion event.

As a result of the fish intrusion, the licensee performed several corrective actions. The licensee initiated a year-long study, with the support of a vendor, to evaluate the shad in the safe shutdown impoundment. In the spring of 2012, the licensee installed an additional floating barrier to help prevent the dead shad in the safe shutdown impoundment from entering the service water system. In addition, the licensee installed a barrier at the equalization canal to prevent the shad in the Squaw Creek Reservoir from entering the safe shutdown impoundment.

The inspectors determined that the licensee failed to identify the condition adverse to quality in 2007 and it is therefore not representative of current performance.

Analysis. The licensee's failure to identify a condition adverse to quality related to operating experience on fish intrusion into cooling water systems was a performance deficiency. The finding was more than minor because it was associated with the protection against external events attribute of the mitigating systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the fish intrusion resulted in the clogging of strainers and the lowering of service water flow to safety-related pumps. Using NRC Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance because it was not a design or qualification deficiency, was not a loss of system safety function, was not an actual loss of safety function of a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding did not have a cross-cutting aspect because the performance deficiency was not representative of current plant performance.

Enforcement. Title 10 CFR Part 50, Appendix B, Criterion XVI, requires, in part, that measures shall be established to assure that conditions adverse to quality are promptly identified and corrected. Contrary to the above, on July 1, 2008, the licensee failed to identify and correct a condition adverse to quality through the evaluation of industry operating experience related to fish intrusion into safety-related cooling water systems. Subsequently, shad from the safe shutdown impoundment blocked cooling flow to safety-related pumps when they were caught in strainers. The licensee initiated Condition Report CR-2012-006133 and installed barriers to mitigate potential fish intrusion. Because this violation was of very low safety significance and was entered

into the licensee's corrective action program, it is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy: NCV 05000445/2012003-03; 05000446/2012003-03, "Failure to Adequately Evaluate Fish Intrusion Operating Experience and Initiate Corrective Action."

2. Failure to Take Corrective Actions for Safety Chiller Trips

Introduction. The inspectors identified a Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for the failure to identify and correct a condition adverse to quality. Specifically, safety chiller 2-06 tripped twice, but the licensee failed to develop corrective actions or provide any justification for not taking corrective actions.

Description. During normal operation, the safety chillers operate with at least the load from the uninterruptible power supply and distribution room fan coil unit. The fan coil unit is periodically stopped for scheduled work activities. In 2010, as documented in Condition Report CR-2010-007335, safety chiller 2-06 tripped as a result of unstable operation following the securing of the fan coil unit with no other loads on the system. Safety chiller 2-06 is inoperable while tripped. For corrective actions, the licensee revised Procedure SOP-803, "Uninterruptible Power Supply and Distribution Rooms Cooling Systems," Revision 10, to start additional loads on the safety chiller when the fan coil unit was stopped.

In 2011, as documented in Condition Report CR-2011-006692, safety chiller 2-06 tripped twice after the fan coil unit was stopped. The licensee performed a low tier cause analysis and determined that the safety chiller tripped as a result of unstable operation following unloaded operation when the fan coil unit was stopped. The cause analysis implied that operators failed to follow the revised procedure.

The inspectors reviewed Condition Report CR-2011-006692 and determined that the licensee had closed the condition report after monitoring for further trips with no other corrective actions. Therefore, the inspectors concluded that no corrective actions were taken for the two safety chiller trips.

The inspectors determined, through interviews, that the licensee had revised the cause analysis conclusion based on suspect information that the system was unloaded, which resulted in no corrective actions developed. Therefore, the inspectors concluded that the licensee failed to thoroughly evaluate the problem.

Analysis. The licensee's failure to identify and correct a condition adverse to quality related to two safety chiller trips was a performance deficiency. The finding was more than minor because it was associated with the equipment performance attribute of the mitigating systems cornerstone and adversely affected the cornerstone objective to ensure the availability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the safety chillers are unavailable while they are tripped. Using NRC Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance because it was not a design or qualification deficiency, was not a loss of system safety function, was not an actual loss of safety function of a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding has a problem identification and resolution cross-cutting aspect associated with the corrective action program because

the licensee failed to thoroughly evaluate the problem such that the resolution addresses the cause [P.1c].

Enforcement. Title 10 CFR Part 50, Appendix B, Criterion XVI, states, in part, that measures shall be established to assure that conditions adverse to quality, such as failures, are identified and corrected. Contrary to the above, as of February 28, 2012, the licensee failed to identify and correct a condition adverse to quality in that safety chiller 2-06 tripped twice in 2011 with no corrective actions. Because the violation was of very low safety significance and was documented in the licensee's corrective action program as Condition Report CR-2012-006136, it is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy:
NCV 05000446/2012003-04, "Failure to Take Corrective Actions for Safety Chiller Trips."

4OA6 Meetings

Exit Meeting Summary

On April 5, 2012, the inspectors presented the plant modification inspection results to Mr. B. Mays, Vice President, Nuclear Engineering and Support, and other members of the licensee's staff. The licensee acknowledged the results as presented. The inspectors acknowledged review of proprietary material during the inspection. No proprietary information has been included in the report.

On June 13, 2012, the inspectors presented the resident inspection results to Mr. B. Mays, Vice President, Engineering and Support, 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 has been included in the report.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

R. Flores, Senior Vice President and Chief Nuclear Officer
T. Gilder, Director, Performance Improvement
D. Goodwin, Director, Engineering Support
T. Hope, Manager, Nuclear Licensing
B. Kidwell, Manager, Emergency Preparedness
F. Madden, Director, Oversight and Regulatory Affairs
B. Mays, Vice President, Engineering and Support
K. Nickerson, Director, Site Engineering
B. Patrick, Director, Maintenance
K. Peters, Site Vice President
S. Sewell, Director, Organizational Effectiveness
M. Smith, Director, Operations
S. Smith, Plant Manager
K. Tate, Manager, Security
D. Wilder, Director, Plant Support

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000445/2012003-01 05000446/2012003-01	NCV	Failure to Analyze Tornado Missile Strike on Turbine Driven Auxiliary Feedwater Exhaust Pipe (Section 1R15)
05000445/2012003-02 05000446/2012003-02	NCV	Failure to Revise Turbine Driven Auxiliary Feedwater Pump Acceptance Criteria (Section 1R22)
05000445/2012003-03 05000446/2012003-03	NCV	Failure to Adequately Evaluate Fish Intrusion Operating Experience and Initiate Corrective Action (Section 4OA2.3)
05000446/2012003-04	NCV	Failure to Take Corrective Actions for Safety Chiller Trips (Section 4OA2.3)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

PROCEDURES

NUMBER	TITLE	REVISION
ABN-907	Acts of Nature	12

Section 1RO5: Fire Protection

PROCEDURES

NUMBER	TITLE	REVISION
FPI-501	Electrical and Control Building Elevation 778'-0"	4
FPI-510	Electrical and Control Building Chiller Pump Rooms Elevation 778'-0"	3

Section 1R12: Maintenance Effectiveness

CONDITION REPORTS

2009-000810	2010-004213	2010-011240	2011-000532
2011-010019			

PROCEDURES

NUMBER	TITLE	REVISION
STA-744	Maintenance Effectiveness Monitoring Program	6
MSE-S0-6301	6.9KV Air Circuit Breaker Inspection and Cleaning	6
MSE-C0-6305	6.9KV 7.5HK Circuit Breaker Enhanced Maintenance	2

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

PROCEDURES

NUMBER	TITLE	REVISION
WCI-202	Maintenance Risk Assessment	0

MISCELLANEOUS DOCUMENTS

NUMBER	TITLE	REVISION
M1-0253, Sh. A	Flow Diagram, Chemical and Volume Control System	CP-10
DBD-ME-255	Chemical and Volume Control System	32
TNE-EE-CA-0008-265	Protective Relay Settings for 6.9kV Safeguard Buses Coordination Curve 2323-CC-6	4

Section 1R17: Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications

CALCULATIONS

NUMBER	TITLE	REVISION
ME-CA-0260-5471	Residual Heat Removal Temperature Limits	0
CS-CA-0000-5458	Mechanical Stress Improvement Process Reactor Vessel Support Closure Plate Gusset Modification	0
ME(B) - 389	Reactor Water Storage Tank Setpoints, Volume Requirements, and Time Depletion Analysis	11
ME(B) - 325	Head Losses Between Containment Sumps and Residual Heat Removal Pumps During Recirculation and Net Positive Suction Head	3
ME(B) - 323	Head Losses Between Refueling Water Storage Tank and Safety Injection and Residual Heat Removal Pumps and Comparison of Available and Required Net Positive Suction Head	0
EE (B) - 094	Non Safety Related 125VDC Battery for Control Room Emergency Light	1

PROCEDURES

NUMBER	TITLE	REVISION
RWS-201	Gaseous Waste Processing System	19
RFO-402	Operation Instrumentation for the Fuel Transfer Equipment	12
RFO-502	Fuel Transfer Equipment Checkout Instruction	9
OPT-215-1	Offsite Transmission Network Operability Data Sheet	16
ALM 601	Alarm Procedure Catalytic Hydrogen Recombiner	3
2323-ES-1000	Electrical Installation	98
OPT-448A	Mode 1, 3 & 4 Train B Solid State Protection System Actuation Logic Test	8
ABN-804A	Response to Fire in Safeguards Building	5
ALM-1301A	Alarm Procedure, Diesel Generator 1-01 panel	5
ALM-0102B	Alarm Procedure 2ALB-10B	5
SOP-611B	Iso-Phase Bus Duct Cooling System	7
STA-707	10CFR50.59 AND 10CFR72.48 Reviews	18
	50.59 Resource Manual	5
STA-716	Modification Process	21
ECE-5.01-03	Design Change Notices and Related Process Documentation	12

PROCEDURES

NUMBER	TITLE	REVISION
ECE-5.01-04	Technical Evaluation of Replacement Items	6
ECE-5.01-08	Electronic Design Change Process	17
ECE-6.03	Preparation of Pre-Engineered Item Data Sheets	5

SCREENS

NUMBER	TITLE	REVISION
STA-610 R11	Changes made are In accordance with EPRI PWR Secondary Water Chemistry Guidelines, Revision 7. The procedure provides guidance, actions, and responsibilities on the operation of the plant due to secondary chemistry upsets.	June 23, 2009
ALM-0061B-R4-11	Modified PDP SUCT STAB LVL HI-HI alarm response based on engineering recommendations from ACTN-MAN-2009-004693-01-00. Sequence of actions to restore PDP suction stabilizer level caused by high VCT pressure is to reduce VCT pressure, then drain PDP suction stabilizer. Operating experience information has been placed In instructions to assist in effort.	September 10, 2009
ODA-308-13.7.39-S01	Added Note to identify engineering information for the Unit 1 and Unit 2 Containment Equipment Hatch Missile Shield. Engineering analysis of the equipment hatch bolts necessary to maintain the "missile shield" function is determined to be 10 bolts installed; thus, removal of bolts up to maintaining the installed 10 bolts during a Unit shutdown satisfies the Missile Shield requirements.	April 2, 2011
EV-CR-2011-013646-2	59SC - Revision 1 to EV-CR-2011-001250-2. Address the discrepancies identified in CR-2011-013646. A Compensatory Action described in EV-CR-2011-001250-1 is being taken to mitigate the cold ambient temperatures measured on piping associated with the Auxiliary Feedwater system in room 1-100A because the temperature is approaching the freezing point. The Compensatory Action is also applicable to rooms 1-100B/C/D and 2-100A/B/C/D.	January 12, 2012
EV-CR-2011-013575-2	59SC - Perform a 50.59 Screen on the Compensatory Action implemented under WO 4300817. A Compensatory Action described in EV-CR-2011-013575-1 is being taken to mitigate the cold ambient temperatures measured on piping associated with the Auxiliary Feedwater System.	January 12, 2012
EV-CR-2011-013799-2	59SC - Perform a 50.59 Screen on Shift Manager Clearance SMP-11-0219. The activity is a shift manager clearance that places a caution tag on and shuts 1CS-8390 because there is a boric acid leak downstream of the valve.	December 19, 2011

SCREENS

NUMBER	TITLE	REVISION
EV-CR-2011-008506-6	59SC - Procedure revised to add two new sources of water for the EDG Jacket Water Cooling System.	December 14, 2011
EV-CR-2011-011478-2	59SC - Perform a 50.59 Screen for supplemental room cooling to the Unit 1 Train B RHR and CCW pump rooms specified under WO 4260909 and EV-CR-2011-011478-1.	October 13, 2011
EV-CR-2011-011270-2	59SC - Compensatory Action 50.59 Screen. Compensatory Action to Shim the Cover for the SSW Pump Motor Thrust Bearing RTE.	October 10, 2011
EV-CR-2011-011417-1	59SC - Perform 10 CFR 50.59 Screen for the additional plugging of tubes in the CCW HX 1-02 during 1RF15.	October 20, 2011
ODA-308-3.9.0-S01	Industry OE Identified weakness in a Utility's tracking of a Common MCC power supply. CPNPP review recognized that selected Common MCCs provide power to TS (TS, TRM, ODCM) related SSCs and the availability of power to the Common Moe can potentially impact the safety function of the SSC. This supplemental LCOAR provides information related to the Common MCCs impact, and the process controls for assessing Unit Common SSCs when a Common MCC power supply is degraded.	August 9, 2010
EV-CR-2012-001289-2	59SC - Perform a 50.59 Screen on the Compensatory Action described in EV-CR-2012-001289-1. A Compensatory Action is required to manually charge Pressurizer Power Operated Relief Valves nitrogen accumulator tanks through nitrogen monitoring instrument impulse turbine because the normal nitrogen supply is unavailable.	February 8, 2012
EV-CR-2011-013803-5	59SC - Perform 50.59 Screen for Compensatory Action. Compensatory Action to add temporary support in the base of Primary Leakage Water Return Pump 2-B (2-SS15D005) for the purpose of stiffening base to reduce vibration amplitudes to acceptable levels	January 31, 2012
59SC-2007-003115-04-08	Revision 08 Issue CCNs to Control Room Habitability Calculations ME (B) -317 Rev 2 and ME (B) -615 Rev 1. Issue Calculation	December 15, 2011
59SC-2009-006006-01-00	The slot in the mechanical trip lever for the overspeed trip on the TDAFW Pumps is being lengthened.	December 13, 2011
59SC-2011-000171-01-00	This activity accepts a reduced wall thickness value for the shell side of Moisture Separator Reheater 1A.	October 8, 2011
59SC-2010-000011-01-00	Replace the Elgar UPS system in CP1-ECPRLV-15 with a new, updated digital system that resolves the maintenance and obsolescence issues.	August 3, 2011
59SC-2011-000126-01-00	This activity is to approve a Raychem kit for W-003 cable type serving RCP-1-01 at 6.9 KV Switchgear 1A1/2.	July 13, 2011

SCREENS

NUMBER	TITLE	REVISION
59SC-2011-000063-01-00	DBD-ME-260 is being revised to incorporate new temperature limits being implemented as a result of Information Notice 10-11.	April 23, 2011
59SC-2011-000097-01-00	Replacement piping for a portion of the 2-02 DG Fuel Oil supply header does not have a pipe plug shown on the vendor drawing because it is unused.	May 11, 2011
59SC-2008-001609-01-03	Revision 03: Incorporate UFSAR change LDCR-SA-2009-014 with this 50.59 screen to be able to incorporate the plant changes into the UFSAR.	May 2, 2011
EV-CR-2008-003510-00-4	59SC - LDCR TR-2008-004 revises TRB 13.3.5 "Loss of Power (LOP) Diesel Generator (DG) Start Instrumentation Response Times." And TRM Table 13.3.5-1 “Loss of Power Diesel Generator Start Instrumentation Response Time Limits.” to remove inconsistency with Technical Specification bases B 3.3.5.	October 16, 2008
EV-CR-2010-003216-9	59SC - Perform a 50.59 Screen for the Gas Decay Tank LDCR.	August 31, 2010
EV-CR-2011-002383-14	This 50.59 screen for LDCR to clarify the TS basis for regulatory verses administrative dose limits is considered not necessary. Once the Westinghouse analysis for increase of Control Room unfiltered air in-leakage is completed, there will be no need for the LDCR action.	June 12, 2011
EV-CR-2011-001316-4	59SC - ER-ME-108 provides recommendations for changes to inspection frequencies for fire dampers to be extended from 18 months to 24 months based on guidance in NFPA 90A-1999.	November 1, 2011
OPT-215-1	FDA-2010-000125-01 added two new 345KV lines into CPNPP that can be credited for independent transmission lines into the site, FDA-2010-000125-02 is removing 345KV transmission line BKR controls from MCB; thus, indication of BKR status will have to be obtained via Grid Controller or computer points when installed. LDCR No. SA-2010-020 (Reference EV-CR-2009-005301-00-7) FSAR (Gussion utilized to identify Operable Transmission line pairs which includes new lines (Everman and Parker 2), and, addition of Wolf Hollow line which is independent supply to CPNPP switchyard. Future naming of Venus line to be Johnson Switch. Other minor editorial changes.	April 23, 2011
59SC-2009-001570-02-00	FDA-2009-001570-04 modifies Station Service Water System piping for the installation of redundant simplex duplex basket type strainers on the inlet of the Unit 1 Train A and B CSP bearing coolers and Train B SIP and CCP lube oil coolers.	January 12, 2011

DESIGN CHANGE PACKAGES

NUMBER	TITLE	REVISION
FDA-2010-000122-01-00	If needed following inspection of the Unit 1/2 CST diaphragm, modify the floats to permanently secure them to the diaphragm.	July 12, 2010
FDA-2011-000063	Revision of Design Basis Documents for Prevention of Steam Voiding in Residual Heat Removal Systems During Shutdown Cooling Evolutions	April 14, 2011
FDA-2011-000064	Localized Corrosion Found Below Minimum Wall Thickness on the Shell of the Evaporative Heat Exchanger on Safety Water Chiller Number 5	April 14, 2011
FDA-2011-000178	Issue a use-as-is FDA to accept as-found EDG turbo-charger bearing clearance. Rev. 1 Add design input and 5059 screen.	October 10, 2011
FDA 2005-002203-02	Replace Westinghouse Universal Logic Boards with Complex Programmable Logic Device in Solid State Protection system cabinet TCX-ESELSP-01 Train B	November 12, 2009
FDA 2008-002132	Provide a Temporary Jumper between Cell 38 and 40 of Battery CP1-EPBTND-07, so that the Damaged Cell 39 is Taken out of Service	January 29, 2010
FDA-2008-001060-01-00	Provide Justification for Installation of a Permanent Clamp to Fix Instrument Air Solder Connection Leaks	October 13, 2009
FDR 2008-003459-07	Provide the Process for Revision of the Containment Isolation System, Safety Injection System, and the Residual Heat Removal System Design Basis Documents to Address response to the Generic Letter 2008-01,"Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems	May 17, 2010
FDA-2009-002617-01-00	Revise Specification ES-100 to Address Acceptable Methods of Bonding for Sections of Buried Metallic Piping	September 114, 2009
FDA-2010-000125-02	Remove 345KV Transmission Line Breaker Controls from Comanche Peak Nuclear Power Plant Main Control Board CB12 to Allow Oncor Transmission System Provider Modifications	January 31, 2012
FDA-2010-000045-01-00	Replace Reactor Head Vent Valve	April 26, 2010
FDA-2006-002873-01-00	Revise DBD-CS-018 to Add Analysis Requirements for Manual Valves with Stem Extensions	December 2, 2009

EVALUATIONS

NUMBER	TITLE	REVISION
59EV-2006-003080-03-00	One of the CPNPP Power Uprate modifications installed new Isolated Phase Bus Cooling Units, controlled by digital technology equipment, which replace non-digital equipment used to control the existing Isolated Phase Bus Cooling Unit.	
59EV-2006-003080-04-00	The Power Uprate modification revises software for the Feedwater pump Mark V control system to add logic for three new inputs from pressure switches monitoring Feed Water Suction.	
59EV-2007-001888-01-00	The modification is required because the current anti-collision design inappropriately interferes with normal operation of the jib crane. The Polar Crane/Telescopic Jib Crane Anti-collision features are to be modified.	
59EV-2007-003164-01-00	Design Modification DMA-2007-003164-01 (FDA-2007-003164-01 and FDA-2007-003164-02) replaces existing Fuel Handling Bridge Crane with a new crane because of long-standing operational problems with the existing crane.	
59EV-2009-000214-01-00	The method of evaluation for a misloaded fuel assembly is described in the safety analysis in Section 15.4.7 of the FSAR. The misloaded assembly analysis methodology described in FSAR 15.4.7 is being changed from the Luminant methods detailed in RXE-91-002 to the Westinghouse methodology described in WCAP-16676-NP.	
59EV-2009-000859-01-01	Seismic and structural analyses were performed on ancillary equipment provided under 10 CFR 72 in order to demonstrate conformance with UFSAR requirements.	
59EV-2009-002486-01-00	Unit 2 Power Operated Relief Valve (PORV) 2-PCV-0456 has been observed to have minimal seat leakage as evidenced by increased tailpipe temperatures.	
59EV-2010-000011-01-00	FDA-2010-000011-01 and -02 replace the Elgar UPS systems in CP1-ECPRLV-15 and CP2-ECPRLV-15 (respectively) with new UPS systems with digital controls that resolve the maintenance and obsolescence issues.	
59EV-2011-000012-01-00	TRM change (LDCR-TR-2011-001 under EV-CR-2010-004974-5) and procedure change to ODA-308-13.7.39-S01-R1-P0 is required for Maintenance activities which temporarily operate 'open' the hinged middle panel of Emergency Diesel Generator tornado missile barrier with the EDG Operable. The change is needed to allow the door to be open for no greater than 12 hours under administrative controls.	

DRAWINGS

NUMBER	TITLE	REVISION
EX-CB12, Sheet 1	Main Control Board detailed Layout, CPX-ECPRCB-12	3
EX-CB12, Sheet 2	Main Control Board detailed Layout, CPX-ECPRCB-12	3
EX-CB12, Sheet 3	Main Control Board detailed Layout, CPX-ECPRCB-12	8
E1-0018 Sheet 4	Primary Plant Unit 1, Electrical Lighting One line diagram, Control Building	1
M1-0263	Flow Diagram Safety Injection System	16
E1-0024, Sheet 3B	120V AC Unit Instrument Distribution Panel One Line Diagram	1
W12LV152861-F	Shutdown Transfer Panel, CP1-ECPRLV-15, Internal Wiring Diagram Unit 1	6
M1-0215, Sheet H	Flow Diagram, jacket Water Piping, CP1-MEDGEE-01	10
M1-0215, Sheet 3A	Flow Diagram, Safeguard and Diesel Generator Buildings, Unit 1 Fire Protection	8
M1-0234	Flow Diagram, Station Service Water System	25
E1-0024- Sheet 3B	120VAC unit instrument distribution panel online	14
M2-0215 Sheet G	Flow Diagram Diesel Fuel Oil Piping CP2-MEDGEE-02	11
M1-0270 Sheet A	Flow Diagram Waste Processing System (Gas)	6
M1-0217 Sheet A	Flow Diagram Service Air System	17

MISCELLANEOUS DOCUMENTS

NUMBER	TITLE	REVISION
2323-AS-36	Gypsum Construction	1
CPES-M-1078	Fabrication and Erection of Piping	9
OPT-215-1	Offsite Transmission Network Operability Data Sheet	16
OPT-448A	Mode 1, 3 & 4 Train B SSPS Actuation Logic Test	8
WCAP-16770-P	Westinghouse SSPS Safeguards Driver Board Replacement Summary Report 6D30350G01/G02	0
WCAP-16771-P	Westinghouse SSPS Undervoltage Driver Board Replacement Summary Report 6D30350G01/G02	0
WCAP-16769-P	Westinghouse SSPS Universal Logic Board Replacement Summary Report 6D30225G01/G02/G03/G041	0
WCAP-16772-P	Westinghouse SSPS Semi-Automatic Tester Board Replacement Summary Report 6D30350G01/G02/G03/G04/G05	0

Section 1R19: Post-Maintenance Testing

WORK ORDERS

4021652	4021666	4385617

Section 1R22: Surveillance Testing

WORK ORDERS

4292835	3577183	4354024

MISCELLANEOUS DOCUMENTS

NUMBER	TITLE	REVISION
M1-0232	Flow Diagram Containment Spray System	CP-31
M1-0232A	Flow Diagram Containment Spray System	CP-22
ME-CA-0232-3302	Containment Spray System Educator Surveillance Criteria	1
DBD-ME-206	Auxiliary Feedwater System	26

CONDITION REPORTS

2012-003443	2012-003680	2012-004208

Section1EP6: Drill Evaluation

CONDITION REPORTS

2012-005703	2012-005704	2012-005705	2012-005706
2012-005707	2012-005708	2012-005711	2012-005714
2012-005718	2012-005721	2012-005729	

Section 4OA2: Identification and Resolution of Problems

CONDITION REPORTS

2010-005628	2010-007335	2010-010550	2011-006100
2011-006692	2011-008520	2012-005545	2012-005546