



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION IV
1600 E LAMAR BLVD
ARLINGTON, TX 76011-4511

November 13, 2014

Louis P. Cortopassi, Site Vice President
Omaha Public Power District
Fort Calhoun Station
P.O. Box 550
Fort Calhoun, NE 68023-0550

Subject: FORT CALHOUN - NRC INTEGRATED INSPECTION REPORT
NUMBER 05000285/2014004

Dear Mr. Cortopassi:

On September 30, 2014, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Fort Calhoun Station. On October 15, 2014, the NRC inspectors discussed the results of this inspection with you, and other members of your staff. The inspectors documented the results of this inspection in the enclosed inspection report.

NRC inspectors documented three findings of very low safety significance (Green) in this report. These findings involved two violations of NRC requirements.

If you contest these violations or significance of the NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region IV; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the FCS.

If you disagree with the cross-cutting aspect assignments, or with a finding not associated with a regulatory requirement in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region IV; and the NRC Resident Inspector at the Fort Calhoun Station.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agency wide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Michael C. Hay
Chief, Project Branch D
Division of Reactor Projects

Docket: 50-285
License: DPR-40

Enclosure:
NRC Inspection Report 05000285/2014004
w/Attachment: Supplemental Information

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Subject: FORT CALHOUN - NRC INTEGRATED INSPECTION REPORT
NUMBER 05000285/2014004

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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket: 05000285
License: DPR-40
Report: 05000285/2014004
Licensee: Omaha Public Power District
Facility: Fort Calhoun Station
Location: 9610 Power Lane
Blair, NE 68008
Dates: July 1 through September 30, 2014
Inspectors: S. Schneider, Senior Resident Inspector
N. Taylor, Senior Project Engineer
J. Kirkland, Senior Resident Inspector
J. Wingeback, Resident Inspector
B. Cummings, Project Engineer
P. Jayroe, Reactor Inspector
L. Ricketson, P.E., Senior Health Physicist
N. Greene, Ph.D., Health Physicist
P. Hernandez, Health Physicist
J. O'Donnell, Health Physicist

Approved By: Michael C. Hay, Chief, Project Branch D
Division of Reactor Projects

SUMMARY

IR 05000285/2014004; 07/01/2014 – 09/30/2014; Fort Calhoun Station, Operability Determinations and Functionality Assessments, Plant Modifications.

The inspection activities described in this report were performed between July 1 and September 30, 2014, by the resident inspectors at FCS and inspectors from the NRC's Region IV office. Three findings of very low safety significance (Green) are documented in this report. Two of these findings involved violations of NRC requirements. The significance of inspection findings is indicated by their color (Green, White, Yellow, or Red), which is determined using Inspection Manual Chapter 0609, "Significance Determination Process." Their cross-cutting aspects are determined using Inspection Manual Chapter 0310, "Aspects within the Cross-Cutting Areas." Violations of NRC requirements are dispositioned in accordance with the NRC Enforcement Policy. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process."

Cornerstone: Mitigating Systems

Green. The inspectors identified a Green finding for the licensee's failure to implement procedural changes and water level alarm setpoint changes relied upon by operators to initiate compensatory actions to maintain the operability of raw water pump AC-10C. The licensee subsequently implemented these changes.

The performance deficiency is more than minor because it is related to the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the reliability of systems that respond to initiating events to prevent undesirable consequences, in that the failure to implement the required procedure and setpoint changes increased the likelihood that the affected raw water pump cable would become inoperable after significant rainfall or flooding. The inspectors performed an initial screening of the finding in accordance with NRC Manual Chapter IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." Using IMC 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," dated July 1, 2012, this finding is of very low safety significance (Green) because it: (1) was not a deficiency affecting the design or qualification of a mitigating system; (2) did not represent a loss of system and/or function; (3) did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time; and (4) does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24 hours. The finding has a cross-cutting aspect in the Human Performance area associated with the Avoiding Complacency aspect because operators did not recognize and plan for the possibility of mistakes and assumed that the necessary procedural and alarm setpoint changes had been made [H.12]. (Section 1R15).

Green. The inspectors identified a Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," because the licensee failed to ensure that a surveillance test program was sufficient to demonstrate that the containment spray (CS) system would perform satisfactorily in service. Specifically, from February, 2014, to September, 2014, the licensee failed on several occasions to adequately adjust the frequency of testing for gas voids in the CS system upon identification of gas voids beyond acceptance criteria. Consequently, the test monitoring frequency did not ensure operability of the CS system between tests. Subsequently, the licensee increased the CS monitoring frequency.

The performance deficiency is more than minor because it is associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the reliability of systems that respond to initiating events to prevent undesirable consequences. The inspectors performed an initial screening of the finding in accordance with NRC Manual Chapter IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." Using IMC 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," dated July 1, 2012, this finding is of very low safety significance (Green) because it: (1) was not a deficiency affecting the design or qualification of a mitigating system; (2) did not represent a loss of system and/or function; (3) did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time; and (4) does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant for greater than 24 hours in accordance with the licensee's maintenance rule program. The finding has a cross-cutting aspect in the Problem Identification and Resolution area and the Trending aspect because the licensee failed to trend and analyze information from the corrective action program and other assessments in the aggregate to identify programmatic and common cause issues [P.4]. (Section 1R15)

Green. The inspectors identified a Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." because the licensee did not implement design-control measures commensurate with those applied to the original design when they implemented a system modification to the emergency diesel generator's (EDG's) fuel oil transfer systems. Specifically, in 1991, the licensee did not implement the design change or modification process when they placed an auxiliary boiler underground fuel oil storage tank fuel oil transfer system into service to meet the support function of transferring sufficient fuel to meet the mission time of the EDG's safety function. The licensee has scheduled a design review of this modification.

The performance deficiency is more than minor because it is associated with the Design Control attribute of the Mitigating Systems cornerstone and adversely affected the cornerstones objective to ensure the reliability of systems that respond to mitigating events to prevent undesirable consequences. Despite not performing a design review of this modification, no loss of the fuel oil transfer system function occurred. The inspectors performed an initial screening of the finding in accordance with NRC Manual Chapter IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." Using IMC 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," dated July 1, 2012, this finding is of very low safety significance (Green) because it: (1) was not a deficiency affecting the design or qualification of a mitigating system; (2) did not represent a loss of system and/or function; (3) did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time; and (4) does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant for greater than 24 hours in accordance with the licensee's maintenance rule program. The finding does not have a cross-cutting aspect because the failure to implement the design change verification process is not indicative of current licensee performance. The licensee's current design change procedures require design reviews of this type of in-field modification. (Section 1R18)

PLANT STATUS

The unit began the inspection period at 100% power and continued to operate at 100% power throughout the inspection period.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

.1 Readiness for Impending Adverse Weather Conditions

a. Inspection Scope

On September 9, 2014, the inspectors completed an inspection of the station's readiness for impending adverse weather conditions. The inspectors reviewed plant design features, the licensee's procedures to respond to tornadoes and high winds, and the licensee's [planned] implementation of these procedures. The inspectors evaluated operator staffing and accessibility of controls and indications for those systems required to control the plant.

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

b. Findings

No findings were identified.

.2 Summer Readiness of Offsite and Alternate Alternating Current (AC) Power Systems

a. Inspection Scope

On July 31, 2014, the inspectors completed an inspection of the station's offsite and alternate AC power systems. The inspectors inspected the material condition of these systems, including transformers and other switchyard equipment to verify that plant features and procedures were appropriate for operation and continued availability of offsite and alternate AC power systems. The inspectors reviewed outstanding work orders and open condition reports for these systems. The inspectors walked down the switchyard to observe the material condition of equipment providing offsite power sources. The inspectors verified that the licensee procedures included appropriate measures to monitor and maintain availability and reliability of the offsite and onsite AC power systems.

These activities constituted one sample of summer readiness of off-site and alternate-ac power systems, as defined in Inspection Procedure 71111.01.

b. Findings

No findings were identified.

1R04 Equipment Alignment (71111.04)

.1 Partial Walkdown

a. Inspection Scope

The inspectors performed partial system walk-downs of the following risk-significant systems and components:

- July 29, intake structure component position verification during maintenance on motor operated sluice gate CW-14F
- July 29, motor driven auxiliary feedwater pump FW-6
- July 31, steam driven auxiliary feedwater pump FW-10 following surveillance activities while EDG No. 2 was inoperable
- August 8, EDG No. 2 following surveillance testing

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

These activities constituted four partial system walk-down samples as defined in Inspection Procedure 71111.04.

b. Findings

No findings were identified.

.2 Complete Walkdown

a. Inspection Scope

On August 11, 2014, the inspectors performed a complete system walk-down inspection of the chemical and volume control system (CVCS). The inspectors reviewed the licensee's procedures and system design information to determine the correct CVCS lineup for the existing plant configuration. The inspectors also reviewed outstanding work orders, open condition reports, and other open items tracked by the licensee's operations and engineering departments. The inspectors then visually verified that accessible portions of the system were correctly aligned for the existing plant configuration.

These activities constituted one complete system walk-down sample, as defined in Inspection Procedure 71111.04.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

Quarterly Inspection

a. Inspection Scope

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

- July 13, fire area 35B, EDG No. 2
- July 13, fire area 35A, EDG No. 1
- July 16, fire area 32, compressor area Room 19
- July 17, fire area 46.3, turbine building diesel auxiliary feedwater pump
- August 27, fire area 2, safety injection and containment spray (CS) pump room
- August 27, fire area 1, safety injection and CS pump room

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

These activities constituted six quarterly inspection samples, as defined in Inspection Procedure 71111.05.

b. Findings

No findings were identified.

1R06 Flood Protection Measures (71111.06)

Underground Cable/Manhole Inspections

a. Inspection Scope

On August 11 and August 26, 2014, the inspectors completed an inspection of underground bunkers susceptible to flooding. The inspectors selected two underground bunkers that contained risk-significant or multiple-train cables whose failure could disable risk-significant equipment:

- The bunker associated with manhole 5
- The bunker associated with manhole 31

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

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

b. Findings

No findings were identified.

1R07 Heat Sink Performance (71111.07)

Annual Heat Sink Review

a. Inspection Scope

On September 12, the inspectors completed an inspection of the readiness and availability of a risk-significant heat exchanger. The inspectors reviewed the data from a performance test for raw water/component cooling water heat exchanger AC-1C.

These activities constitute completion of one heat sink performance annual review sample, as defined in Inspection Procedure 71111.07.

b. Findings

No findings were identified.

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

.1 Review of Licensed Operator Requalification

a. Inspection Scope

On July 22, and August 4, 2014, the inspectors observed simulator training for an operating crew. The inspectors assessed the performance of the operators and the evaluators' critique of their performance. The inspectors also assessed the modeling and performance of the simulator during the simulation activities.

These activities constitute completion of two quarterly licensed operator requalification program samples, as defined in Inspection Procedure 71111.11.

b. Findings

No findings were identified.

.2 Review of Licensed Operator Performance

a. Inspection Scope

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

- Response to an unplanned technical specification (TS) shutdown action statement due to an inoperable raw water strainer on August 3
- Response to an unplanned TS shutdown action statement entry due to an inoperable raw water header on August 15
- Turbine load adjustment and response to the identification of air in the component cooling water system on August 24

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

These activities constitute completion of three quarterly licensed operator performance samples, as defined in Inspection Procedure 71111.11.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors reviewed three instances of degraded performance or condition of safety-related structures, systems, and components (SSCs):

- July 13, review of the condition report documenting air identified in the component cooling water system
- June 5, review of the Maintenance Rule functional-failure evaluation for the failure of raw water strainer AC-12B on June 5
- September 15, review of the Maintenance Rule periodic assessment for plant operating Cycle 26

The inspectors reviewed the extent-of-condition of possible common-cause SSC failures and evaluated the adequacy of the licensee's corrective actions. The inspectors reviewed the licensee's work practices to evaluate whether these may have played a role in the degradation of the SSCs. The inspectors assessed the licensee's characterization of the degradation in accordance with 10 CFR 50.65 (the Maintenance Rule), and verified that the licensee was appropriately tracking degraded performance

and conditions in accordance with the Maintenance Rule.

These activities constituted completion of three maintenance effectiveness samples, as defined in Inspection Procedure 71111.12.

b. Findings

No findings were identified.

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

a. Inspection Scope

The inspectors reviewed six risk assessments performed by the licensee prior to changes in plant configuration and the risk management actions taken by the licensee in response to elevated risk:

- July 16, yellow risk associated with auxiliary feedwater pump FW-54 being out of service for maintenance
- July 30, yellow risk during performance of a containment spray and recirculation actuation test
- September 3, yellow risk associated with EDG No. 2 being out of service for maintenance
- September 11, yellow risk during performance of diesel-driven auxiliary feedwater pump monthly full flow operability verification
- September 17, yellow risk during the performance of EDG No. 1 ventilation damper maintenance and testing
- September 29, yellow risk during EDG No. 2 planned maintenance

The inspectors verified that these risk assessments were performed timely and in accordance with the requirements of 10 CFR 50.65 (the Maintenance Rule) and plant procedures. The inspectors reviewed the accuracy and completeness of the licensee's risk assessments and verified that the licensee implemented appropriate risk management actions based on the result of the assessments. The inspectors verified that the licensee appropriately developed and followed a work plan for these activities. The inspectors verified that the licensee took precautions to minimize the impact of the work activities on unaffected systems, structures, and components (SSC's).

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

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15)

a. Inspection Scope

The inspectors reviewed five operability determinations that the licensee performed for degraded or nonconforming structures, systems, or components (SSCs):

- July 30, EDG No.1 inlet dampers do not open to the required degrees from horizontal
- August 24, air entrainment in the component cooling water system
- August 26, raw water pump AC-10C cable submersion
- September 5, voids found in the CS system
- September 12, low pressure safety injection loop flow transmitter degraded

The inspectors reviewed the timeliness and technical adequacy of the licensee's evaluations. Where the licensee determined the degraded SSC to be operable, the inspectors verified that the licensee's compensatory measures were appropriate to provide reasonable assurance of operability. The inspectors verified that the licensee had considered the effect of other degraded conditions on the operability of the degraded SSC.

These activities constitute completion of five operability and functionality review samples, as defined in Inspection Procedure 71111.15.

b. Findings

.1 Raw Water Pump AC-10C Cable Submersion

Introduction: The inspectors identified a Green finding involving the failure to implement compensatory measures that were relied upon to maintain operability of safety related equipment. Specifically, on August 13, 2014, the licensee failed to implement procedural changes and manhole water level alarm setpoint changes that they relied upon to initiate compensatory actions to maintain the operability of raw water pump AC-10C. The licensee subsequently implemented these changes.

Description: The safety related cabling for raw water pump AC-10C requires manual compensatory measures to ensure its operability. In October, 2012, the licensee discovered moisture inside the 'C' phase AC power supply underground cable to raw water pump AC-10C. The licensee concluded the moisture in the cable was concentrated between the primary insulation and the jacket resulting from damage or degradation to portions of the outer cable jacket allowing water intrusion during periods of cable submergence. The licensee discovered the moisture at a junction box inside the intake structure. The licensee determined that the cable transported water from the location of the damaged outer jacket to the junction box under water pressure. While the licensee determined the cable insulation characteristics were acceptable, dewatering of the manholes is necessary to prevent significant water flow inside the cable and to

eliminate the possibility of a ground caused by water in the junction box. A splice installed on the cable inside the intake structure had been evaluated by a vendor to halt the flow of moisture inside the cable for a period of up to six hours. Based on this analysis, the licensee determined that to prevent the submergence of the cable for more than six hours, they must implement manual actions to dewater cable manholes in the event of significant rainfall.

On July 26, 2014, the licensee implemented an interim action to have maintenance personnel visually inspect manholes 5 and 31 in the event of rainfall rates over 0.2 inches per hour. In addition, a manhole level sensing instrument already provided an alarm to operators at 30 inches above the bottom of the manhole to provide a warning prior to water level reaching safety related cables located 36 inches above the bottom of the manhole. On August 13, the licensee approved a revision to the operability determination that modified these instructions. In this revision, the licensee required operations to initiate manhole inspections and pumping after the manhole level monitoring system alarmed at a new setpoint of 10 inches from the bottom of the manhole. Following the approval of the revised operability determination on August 13, the licensee modified Shift Manager turnover instructions to reflect the updated alarm setpoint and the change to the response procedure; however, the changes to the alarm setpoint (from 30 inches to 10 inches from the bottom of the manhole) and the revision to the response procedure had not been completed and this was not identified by multiple shifts of operations personnel.

On August 26, the inspectors requested for review documentation that addressed the change in the alarm setpoint to 10 inches and the revision to the applicable procedural guidance. The licensee subsequently identified that they had not revised the procedure or changed the setpoint of the manhole water level sensing instrument on August 13. These actions were completed on August 29. During the interim period, a heavy rainfall event occurred on August 28, resulting in delayed dewatering of manhole 5. Consequently, water level in the manhole reached the level of the damaged cable for approximately two hours. Although the six hour limit was not challenged, the licensee declared raw water pump AC-10C inoperable until the cable was uncovered.

Analysis: The failure to implement the procedural and alarm setpoint changes prior to the approval of the operability determination is a performance deficiency. The finding is more than minor because it is related to the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the reliability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to implement the required procedure and setpoint changes increased the likelihood that the affected raw water pump cable would become inoperable after significant rainfall or flooding. The inspectors performed an initial screening of the finding in accordance with NRC Manual Chapter IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." Using IMC 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," dated July 1, 2012, this finding is of very low safety significance (Green) because it: (1) was not a deficiency affecting the design or qualification of a mitigating system; (2) did not represent a loss of system and/or function; (3) did not represent an actual loss of function of a single train for greater than its TS allowed outage time; and (4) does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24 hours. The finding has a cross-cutting

aspect in the Human Performance area associated with the Avoiding Complacency aspect because operators did not recognize and plan for the possibility of mistakes and simply assumed that the necessary procedural and alarm setpoint changes had been made [H.12].

Enforcement: This finding does not involve enforcement action because no violation of regulatory requirements was identified. In response to this finding, the licensee has changed the low level alarm setpoint, revised the procedural guidance, and documented this issue in the corrective action program as Condition Report 2014-11266. This issue is characterized as finding FIN 05000285/2014004-01, "Failure to Implement Procedural and Alarm Setpoint Changes in Support of an Operability Evaluation."

.2 Voids in Containment Spray System

Introduction: The inspectors identified a Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," involving the failure to ensure that a surveillance test program was sufficient to demonstrate that the containment spray (CS) system would perform satisfactorily in service. Specifically, the licensee failed to ensure the frequency of surveillance testing related to detecting gas accumulation in the CS system was adequate to assure that the CS system would perform satisfactorily in service. The licensee has since increased the CS system monitoring frequency.

Description: The presence of gas voids in CS piping could generate water hammer upon system actuation and potentially affect the system design flow rate and damage the CS system. On September 4, 2014, while performing emergency core cooling system (ECCS) gas void measurement tests by ultrasonic testing (UT), the licensee discovered a gas void in the piping. The UT measured a gas void of 9.375" arc length in the pipe. This arc length exceeded the acceptance criterion of 7" arc length established by the licensee to maintain operability of the CS system. Upon discovery of the gas void that exceeded the acceptance criterion, the licensee suspended the test and declared the CS system inoperable. The CS system remained inoperable until later in the day when the licensee vented it and satisfactorily completed the test. The ability to operate the redundant CS header during an accident condition was still available because surveillance testing for gas voids on the redundant header did not identify any voids affecting operability.

On September 5, 2014, the licensee completed an operability assessment of the CS system. The inspectors reviewed that assessment and determined that it was not adequate because it was based upon the licensee's initial determination that the CS system did not require more frequent monitoring to ensure the CS system could perform its specified safety function between surveillance tests. A recent history on the performance of testing is summarized in the following table:

Date	Measurement (Arc Length by UT) Acceptance Criteria < 7"
2/26/2014	10.5"
6/13/2014	9.5"
7/11/2014	6.5"
9/4/2014	9.375"

These data show that three out of the four previous gas accumulation tests had resulted in the presence of gas voids above the licensee's acceptance criterion. Based on this the inspectors determined that the monitoring frequency established by the licensee was not sufficient to ensure that gas voids wouldn't exceed acceptance criterion between tests to ensure the CS system remained operable.

NRC Generic Letter (GL) 08-01 addressed the management of gas accumulation in emergency core cooling, decay heat removal, and CS systems. This GL was issued to all licensed nuclear power reactors and requested that information be submitted to the NRC to demonstrate that the subject systems are in compliance with all regulatory requirements and to determine if additional regulatory action was required. One of the concerns addressed in GL 08-01 was periodic testing. Performance of periodic testing on portions of piping and components in the subject systems where unacceptable gas accumulation may occur is necessary to confirm acceptance limits and operability unless an evaluation has been performed that allows portions of systems to be excluded.

The licensee's program basis document ER-AA-20009, "Managing Gas Accumulation," Section 4.9.7, requires that changes to the gas monitoring frequency of ECCS components are made based on the results of trends in performance. As shown in the table above, the licensee identified unexpected gas accumulation in the CS system over a period of time. The licensee generated condition reports following each occurrence, but did not trend or analyze these results to adjust performance monitoring frequency such that operability of the CS system prior to the next surveillance was ensured. The inspectors subsequently reviewed a licensee calculation which determined that, even though the void exceeded procedural acceptance criteria, due to the location of the void, it would not have resulted in the loss of the CS system function.

Analysis: The failure to establish an appropriate surveillance frequency for monitoring and managing gas accumulation in the CS header was a performance deficiency. The performance deficiency is more than minor because it is associated with the Equipment Performance attribute of the Mitigating Systems Cornerstone, and adversely affected the cornerstone objective of ensuring the availability of systems that respond to initiating events to prevent undesirable consequences. The inspectors performed an initial screening of the finding in accordance with NRC Manual Chapter IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." Using IMC 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," dated July 1, 2012, this finding is of very low safety significance (Green) because it: (1) was not a deficiency affecting the design or qualification of a mitigating system; (2) did not

represent a loss of system and/or function; (3) did not represent an actual loss of function of a single train for greater than its TS allowed outage time; and (4) does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24 hours. This finding has a cross-cutting aspect in the area of Problem Identification and Resolution and the Trending aspect because the licensee failed to trend and analyze information from the corrective action program and other assessments in the aggregate to identify programmatic and common cause issues [P.4].

Enforcement: 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," requires, in part, that a test program be established to assure that all testing required to demonstrate that structures, systems, and components (SSC) will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents. Contrary to the above, during the period from February 2014 through September 2014, the licensee failed to establish a test program that assured that the safety-related CS system would perform satisfactorily in service. Specifically, the licensee did not adjust the frequency of surveillance testing related to detecting gas accumulation in the CS system to assure that the SSC would perform satisfactorily in service. The licensee has entered the violation into the corrective action program under Condition Report 2014-11044 and has increased the test monitoring frequency as an interim corrective action. Long term corrective actions including system modifications and process changes are in development. Because the violation was of very low safety significance and the licensee has entered it into the corrective action program, this violation is being treated as a non-cited violation, consistent with Section 2.3.2.a of the NRC Enforcement Policy: NCV 05000285/2014004-02, "Failure to Maintain a Testing Program for the Containment Spray System."

1R18 Plant Modifications (71111.18)

.1 Temporary Modifications

a. Inspection Scope

On August 18, the inspectors reviewed a temporary modification to install a carbon steel coupling over a pinhole leak on the raw water system. The inspectors verified that the licensee had installed this temporary modification in accordance with technically adequate design documents. The inspectors verified that this modification did not adversely impact the operability or availability of affected SSCs. The inspectors reviewed design documentation and plant procedures affected by the modification to verify the licensee maintained configuration control.

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

b. Findings

No findings were identified.

.2 Permanent Modifications

a. Inspection Scope

On August 26, the inspectors evaluated a permanent modification that had been implemented to provide a fuel oil transfer system from the auxiliary boiler fuel oil storage tank (FO-10) to the EDG fuel oil storage tank (FO-1). The inspectors reviewed the design and implementation of the modification.

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

b. Findings

Introduction: The inspectors identified a Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion III "Design Control," involving the failure to implement adequate design control measures commensurate with those applied to the original design for a system modification to the EDG fuel oil transfer system. Specifically, the licensee did not implement the design change or modification process when an auxiliary boiler fuel oil transfer system was put in place in 1991 to provide the EDG support function of transferring sufficient fuel to meet the EDG 7-day mission time safety function. The licensee has since scheduled a design review for this permanent modification.

Description: In 1991, the licensee determined that the amount of fuel oil stored in the onsite EDG underground fuel oil storage tank (FO-1) would not meet a 7-day mission time to support the EDG safety function. The licensee subsequently credited a volume of 8,000 gallons of fuel oil stored in the auxiliary boiler underground fuel oil storage tank (FO-10) and implemented a fuel oil transfer system that could pump fuel from FO-10 to FO-1.

In response to the inspectors' request for the design documentation associated with the fuel oil transfer methodology, the licensee determined that the FO-10 to FO-1 fuel transfer system credited in the current licensing basis had not been subjected to a design change or modification process and that, as a result, the necessary design inputs, evaluation, and reviews were not performed. The licensee concluded that at the time they had established the FO-10 to FO-1 fuel oil transfer system and methodology, they had not implemented a design modification process to support the safety function of onsite standby power provided by the EDGs. Although a design review had not been performed, no loss of the fuel oil transfer system function occurred.

Analysis: The inspectors determined that the licensee's failure to verify the adequacy of the FO-10 to FO-1 fuel oil transfer system by the performance of design reviews to ensure the EDG onsite power safety function would be met is a performance deficiency that was within the licensee's ability to foresee and prevent and should have been corrected. The finding is more than minor because it is associated with the Design Control attribute of the Mitigating Systems cornerstone, and adversely affected the cornerstone's objective to ensure the reliability of systems that respond to initiating

events to prevent undesirable consequences. Specifically, the failure to evaluate the alternate fuel oil transfer strategy under a controlled design modification process affects the ability to demonstrate a sufficient seven day fuel oil supply exists on-site. The inspectors performed an initial screening of the finding in accordance with NRC Manual Chapter IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." Using IMC 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," dated July 1, 2012, this finding is of very low safety significance (Green) because it: (1) was not a deficiency affecting the design or qualification of a mitigating system; (2) did not represent a loss of system and/or function; (3) did not represent an actual loss of function of a single train for greater than its TS allowed outage time; and (4) does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant for greater than 24 hours in accordance with the licensee's maintenance rule program. This finding does not have a cross-cutting aspect because the failure to implement the design change verification process is not indicative of current licensee performance, in that the licensee's current design-change procedures require design reviews of this type of in-field modification.

Enforcement: 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requires, in part, that measures shall be established to assure that the design basis are correctly translated into specifications, drawings, procedures, and instructions, and that these measures shall provide for verifying or checking the adequacy of design by the performance of design reviews, or by the use of alternate or simplified calculation methods. Contrary to the above, the licensee failed to verify or check the adequacy of the design of the FO-10 to FO-1 fuel oil transfer system. The licensee's corrective actions included scheduling the completion of a FO-10 to FO-1 fuel oil transfer system design review. Because the finding is of very low safety significance and the licensee has entered it into their corrective action program as CR 2014-11001, this is being treated as a non-cited violation, consistent with Section 2.3.2.a of the NRC's Enforcement Policy: NCV 05000285/2014004-03, "Failure to Verify the Adequacy of the Design of the FO-10 to FO-1 Fuel Oil Transfer System."

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed six post-maintenance testing activities that affected risk-significant SSCs:

- July 14, EDG No. 2 following primary and secondary starting air compressor clean and inspect activities
- August 6, charging pump CH-1B following maintenance
- August 7, charging pump CH-1B following poppet replacement
- August 14, air compressor CA-2B following cooler leak repairs
- September 19, component cooling water pump AC-3C following electrical switch replacement

- September 26, EDG No. 2 following air compressor maintenance and solenoid valve replacement

The inspectors reviewed licensing- and design-basis documents for the SSCs and the maintenance and post-maintenance test procedures. The inspectors observed the performance of the post-maintenance tests and/or reviewed the test results to verify that the licensee performed the tests in accordance with approved procedures, satisfied the established acceptance criteria, and restored the operability of the affected SSCs.

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

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed seven risk-significant surveillance tests and/or reviewed the test results to verify that these tests adequately demonstrated that the SSCs were capable of performing their safety functions:

In-service tests:

- July 10, chemical and volume control system pump and check valves
- July 27, safety injection and CS system pumps and valves
- August 27, raw water pump AC-10D

Other surveillance tests:

- July 17, EDG No. 2 surveillance test
- August 1, auxiliary feedwater pump FW-10 steam isolation valves and check valves
- September 17, EDG No. 1 surveillance test
- September 17, Variable over-power trip surveillance test

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

These activities constitute completion of seven surveillance testing inspection samples, as defined in Inspection Procedure 71111.22.

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06)

Emergency Preparedness Drill Observation

a. Inspection Scope

The inspectors observed an emergency preparedness drill on July 22, 2014, to verify the adequacy and capability of the licensee's assessment of drill performance. The inspectors reviewed the drill scenario, observed the drill from the simulator and technical support center, and attended the post-drill critique. The inspectors verified that the licensee's emergency classifications, off-site notifications, and protective action recommendations were appropriate and timely. The inspectors verified that any emergency preparedness weaknesses were identified by the licensee in the post-drill critique and entered into the corrective action program for resolution.

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

b. Findings

No findings were identified.

2. RADIATION SAFETY

Cornerstones: Public Radiation Safety and Occupational Radiation Safety

2RS5 Radiation Monitoring Instrumentation (71124.05)

a. Inspection Scope

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

- Selected plant configurations and alignments of process, post-accident, and effluent monitors with descriptions in the Final Safety Analysis Report and the offsite dose calculation manual
- Selected instrumentation, including effluent monitoring instrument, portable survey instruments, area radiation monitors, continuous air monitors, personnel contamination monitors, portal monitors, and small article monitors to examine their configurations and source checks
- Calibration and testing of process and effluent monitors, laboratory instrumentation, whole body counters, post-accident monitoring instrumentation, portal monitors, personnel contamination monitors, small article monitors, portable survey instruments, area radiation monitors, electronic dosimetry, air

samplers, and continuous air monitors

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

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

b. Findings

No findings were identified.

2RS6 Radioactive Gaseous and Liquid Effluent Treatment (71124.06)

a. Inspection Scope

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

- Radiological effluent release reports since the previous inspection and reports related to the effluent program issued since the previous inspection
- Effluent program implementing procedures, including sampling, monitor setpoint determinations and dose calculations
- Equipment configuration and flow paths of selected gaseous and liquid discharge system components, filtered ventilation system material condition, and significant changes to their effluent release points, if any, and associated 10 CFR 50.59 reviews
- Selected portions of the routine processing and discharge of radioactive gaseous and liquid effluents (including sample collection and analysis)
- Controls used to ensure representative sampling and appropriate compensatory sampling
- Results of the inter-laboratory comparison program
- Effluent stack flow rates
- Surveillance test results of TS required ventilation effluent discharge systems since the previous inspection

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

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

b. Findings

No findings were identified.

2RS7 Radiological Environmental Monitoring Program (71124.07)

a. Inspection Scope

The inspectors evaluated whether FCS's radiological environmental monitoring program quantified the impact of radioactive effluent releases to the environment and sufficiently validated the integrity of the radioactive gaseous and liquid effluent release program. The inspectors verified that the radiological environmental monitoring program was implemented consistent with FCS's TS and offsite dose calculation manual, and that the radioactive effluent release program met the design objective in Appendix I to 10 CFR Part 50. The inspectors verified that FCS's radiological environmental monitoring program monitored non-effluent exposure pathways, was based on sound principles and

assumptions, and validated that doses to members of the public were within regulatory dose limits. The inspectors reviewed or observed the following items:

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

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

b. Findings

No findings were identified.

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

a. Inspection Scope

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

- The solid radioactive waste system description, process control program, and the scope of FCS's audit program

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

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

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

40A1 Performance Indicator Verification (71151)

.1 Unplanned Scrams per 7000 Critical Hours (IEO1)

a. Inspection Scope

The inspectors reviewed licensee event reports (LER's) for the period of December 1, 2013 through June 30, 2014 to determine the number of scrams that had occurred. The inspectors compared the number of scrams reported in these LERs to the number reported for the performance indicator. Additionally, the inspectors sampled monthly operating logs to verify the number of critical hours during the period. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the data reported.

These activities constituted verification of the unplanned scrams per 7000 critical hours performance indicator, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

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

a. Inspection Scope

The inspectors reviewed operating logs and corrective action program records for the period of December 1, 2013 through June 30, 2014 to determine the number of unplanned power changes that occurred. The inspectors compared the number of unplanned power changes documented to the number reported for the performance indicator. Additionally, the inspectors sampled monthly operating logs to verify the number of critical hours during the period. The inspectors used definitions and guidance contained in Nuclear Energy Institute 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the data reported.

These activities constituted verification of the unplanned power changes per 7000 critical hours performance indicator, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.3 Unplanned Scrams with Complications (IE04)

a. Inspection Scope

The inspectors reviewed the licensee's basis for including or excluding in this performance indicator each scram that occurred between December 1, 2013, and June 30, 2014. The inspectors used definitions and guidance contained in Nuclear Energy Institute 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the data reported.

These activities constituted verification of the unplanned scrams with complications performance indicator, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

40A2 Problem Identification and Resolution

.1 Routine Review

a. Inspection Scope

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

b. Findings

No findings were identified.

.2 Annual Follow-up of Selected Issues: Safety Injection Tank 6A Leakage

a. Inspection Scope

The inspectors selected one issue for an in-depth follow-up:

- On September 25, 2014, the licensee's treatment of a degraded condition involving safety injection tank SI-6A.

The inspectors assessed the licensee's problem identification threshold, cause analyses, extent of condition reviews and compensatory actions. The inspectors verified that the licensee appropriately prioritized the planned corrective actions and that these actions were adequate to correct the condition.

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

b. Findings

No findings were identified.

40A3 Follow-up of Events and Notices of Enforcement Discretion

a. Inspection Scope

For the plant events listed below, the inspectors reviewed and/or observed plant parameters, reviewed personnel performance, and evaluated performance of mitigating systems. The inspectors communicated the plant events to appropriate regional personnel, and compared the event details with criteria contained in Inspection Manual Chapter 0309, "Reactive Inspection Decision Basis for Reactors," for consideration of potential reactive inspection activities. As applicable, the inspectors verified that the licensee made appropriate emergency classification assessments and properly reported the event in accordance with 10 CFR Parts 50.72 and 50.73. The inspectors reviewed the licensee's follow-up actions related to the events to assure that the licensee implemented appropriate corrective actions commensurate with their safety significance.

- August 3, an unplanned TS shutdown action statement entry when the licensee declared raw water strainer AC-12B inoperable
- August 13, an acrid odor and visual indication of smoke coming from an electrical panel and electrical conduit
- August 15, an unplanned TS shutdown action statement entry when the licensee declared the east raw water header inoperable
- August 21, an unplanned TS shutdown action statement entry when the licensee declared the motor-driven auxiliary feedwater pump inoperable

These activities constitute completion of four event follow-up samples, as defined in Inspection Procedure 71153.

Findings

No findings were identified.

4OA4 IMC 0350 Inspection Activities (92702)

.1 Flooding Recovery Action Plan Items

a. Inspection Scope

On December 17, 2013, the Nuclear Regulatory Commission issued a Confirmatory Action Letter to FCS (ML13351A395). The Confirmatory Action Letter confirms the commitments in the December 2, 2013, Omaha Public Power District (OPPD), "Integrated Report to Support Restart of FCS and Post-Restart Commitments for Sustained Improvement." In the report, OPPD committed to take actions following restart of the FCS to ensure the improvements realized during the extended outage remain in place and performance continues to improve at the facility. Included in the commitments are completing actions detailed in the Flooding Recovery Action Plan.

Flooding Recovery Action Plan items 4.4.3.1 (Gather flood response lessons learned through CR reviews to determine if procedure or strategy changes should be implemented), 4.4.3.2 (Review flood design basis and determine if the 2011 flood event provides additional information that should drive design basis changes), and 4.4.3.3 (Implement procedure and strategy changes as indicated by the lessons learned review conducted) were reviewed as part of this inspection activity. The purpose of these three action items was to gather information to determine if changes to the flood design basis and procedures were necessary, and implement those changes. All three action items were determined to be long term action items following reactor startup.

On March 12, 2012, the NRC issued "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(F) Regarding Recommendations 2.1.2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident" (ML12053A340). This letter asked the licensee to re-evaluate the flooding hazards at their sites against present-day regulatory guidance and methodologies. Based upon the results of the licensee's reevaluation, the NRC will determine whether additional regulatory actions (e.g., update the design basis and/or SSCs important to safety) are necessary to protect against the updated flooding hazard.

This request for information and the subsequent actions of the NRC are essentially the same as the requirements in the flood recovery plant action items. Since this request for information was transmitted to FCS and the NRC issued Order EA-12-049 (ML12056A045), these action items are closed to the actions detailed in Order EA-12-049.

This activity constitutes completion of action items 4.4.3.1, 4.4.3.2, and 4.3.3.3 as described in the Flood Recovery Action Plan and the December 17, 2013, Confirmatory Action Letter.

b. Findings

No findings were identified.

40A5 Other Activities

(Closed) Severity Level IV Notice of Violation 05000285/2012005-01, Failure to Update the Safety Analysis Report – Solid Waste

This Severity Level IV violation, identified during an NRC inspection conducted from June 18 to August 3, 2012, stated that contrary to 10 CFR 50.71(e), FCS did not periodically update the USAR, originally submitted as part of the application for the license, to assure that the information included in the report contains the latest information developed. Specifically, since December 2006, FCS stored a significant source of radioactivity in the Original Steam Generator Storage Facility (OSGSF), but failed to adequately describe the volume of waste, the principal sources of radioactivity, the total quantity of radioactivity, and the estimated dose rate at the site boundary per curie of radioactivity in the USAR.

FCS responded to the Notice of Violation in a letter dated December 13, 2012. To correct this violation, FCS performed a 50.59 evaluation on changes for the OSGSF, updated the USAR with the appropriate OSGSF information, including site boundary dose rates and curie content, and performed an extent-of-condition review to determine if other on-site radioactive storage facilities required for inclusion to the USAR. Two other facilities were identified and updated as necessary to comply with 10 CFR 50.71(e). Those two facilities were the Radioactive Waste Building, which houses material before shipment offsite, and the Independent Spent Fuel Storage Installation (ISFSI), which houses spent fuel considered to be radioactive waste. The inspectors reviewed the corrective actions and determined the results of the actions taken were adequate. Condition Report CR 2014-11520 was initiated to include additional details on the principal sources of radioactivity for these facilities in Sections 1.2 and 11.2 of the USAR. However, this information was documented in other areas of the USAR and readily available in FCS documents reviewed by the inspector. Thus, this violation is closed.

40A6 Meetings, Including Exit

Exit Meeting Summary

On September 19, 2014, the inspectors presented the radiation safety inspection results to Mr. Lou Cortopassi, Site Vice President.

On October 15, 2014, the inspectors presented the integrated inspection results to Mr. Lou Cortopassi and other members of the licensee's staff. The licensee acknowledged the issues presented. The licensee confirmed that any proprietary information reviewed by the inspectors had been returned or destroyed.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

M. Anderson, Radwaste Chemist, Radwaste and Environmental
S. Anderson, Manager, Design Engineering
D. Bakalar, Manager, Security
R. Beck, Supervisor, Chemistry
J. Bousum, Manager, Emergency Planning and Administration
D. Brehm, Engineer, Radiation Protection
C. Cameron, Regulatory Compliance
L. Cherko, Health Physicist
L. Cortopassi, Site Vice President
S. Coufal, Health Physicist
E. Dean, Plant Manager
E. Durboraw, Health Physicist, Radiation Protection
M. Ferm, Manager, System Engineering
H. Goodman, Site Engineering Director
P. Gunderson, Supervisor, Radiological Operations
J. Hoffman, Primary Chemist, Chemistry
R. Hugenroth, Supervisor Nuclear Oversight
K. Ihnen, Manager, Site Nuclear Oversight
P. Kellogg, Supervisor, ALARA
K. Kingston, Manager, Chemistry
R. Layman, Radwaste/Environmental Chemist
J. Lindsey, Director, Training
D. Little, Radiation Health Specialist
K. Maassen, Program Engineer, GL 89-13
T. Maine, Manager, Radiation Protection
E. Matzke, Senior Licensing Engineer
W. McCall, Health Physicist, Radiation Protection
J. McManis, Manager Engineering Programs
J. Negley, Radwaste/Environmental Chemist
T. Nguyen, Senior Engineer, Systems Engineering
B. Obermeyer, Manager, Corrective Action Program
B. Pearson, Supervisor, Radiation Protection
S. Shea, Supervisor, Operations Training
J. Shipman, Radwaste/Environmental Supervisor, Chemistry
J. Short, Manager, Instrument and Control Maintenance
T. Simpkin, Manager, Site Regulatory Assurance
M. Stewart, Senior Radiation Protection Technician
S. Swanson, Director, Operations
D. Whisler, Supervisor, ALARA
P. Wilhelm, Instrument Technician, Measure and Test Equipment

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000285/2014004-01	FIN	Failure to Implement Procedural and alarm setpoint changes in support of an Operability Evaluation (Section 1R15)
05000285/2014004-02	NCV	Failure to Maintain a Testing Program for the Containment Spray System (Section 1R15)
05000285/2014004-03	NCV	Failure to Verify the Adequacy of the Design of the FO-10 to FO-1 Fuel Oil Transfer System (Section 1R18)

Closed

05000285/2012005-01	NOV	Failure to Update the Safety Analysis Report – Solid Waste (Section 4OA5)
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LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures

AOP-01, Acts of Nature, Revision 40
AOP-31, 161 KV Grid Malfunctions, Revision 14
EOP-02, Loss of Offsite Power, Loss of Forced Circulation, Revision 19
NOD-PP-M-4, Severe Weather Procedure, Revision 13
OI-EG-3, EMS Post-FCS-Trip 161 KV Voltage Prediction and Switchyard Status, Revision 13a
OP-AA-108-111-1001, Severe Weather Preparation, Revision 12
SO-119, Standing Order, Site Generated Missile Protection Standards, Revision 2
SY-AA-101-146, Severe Weather Preparation
SY-FC-101-146-AD-WEARO, Severe Weather Preparation and Response (FCS Specific)

Section 1R04: Equipment Alignment

Procedures

OI-AFW-1, Auxiliary Feedwater System Normal Operation, Revision 83
OI-AFW-4, Auxiliary Feedwater Startup and System Operation, Revision 88
OI-CH-1, Chemical and Volume Control System Normal Operation, Revision 92
OI-CW-1, Operating Instruction Circulating Water System Normal Operation, Revision 83
OI-DG-2, Diesel Generator No. 2 , Revision 69

Condition Reports

CR-2014-9481
CR-2014-9518
CR-2014-9526

Drawings

11405-M-252, Main Steam P & ID, Revision 59

11405-M-253, Steam Generator Feedwater and Blowdown P & ID, Revision 41

11405-M-257, Circulating Water P & ID, Revision 96

E-23866-210-120, Composite Flow Diagram Chemical & Volume Control System, Revision 51

Section 1R05: Fire Protection

Procedures

AOP-06, Fire Emergency Procedure, Revision 28

AOP-06-01, Fire Emergency-Aux Building, Radiation Controlled Area, and Containment,
Revision 3

EA 80-055, 10 CFR 50 Appendix R Safe Shutdown Analysis, Revision 20

FHA-EA97-001, Fire Hazard Analysis Manual, Revision 18

SO-G-28, Standing Order Fire Plan, Revision 87

SO-G-91, Control and Transportation of Combustible Material, Revision 30

SO-G-102, Fire Protection Program Plan, Revision 18

Condition Reports

2013-19962

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