UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

May 14, 2014

Cheryl A. Gayheart
Vice President - Farley
Southern Nuclear Operating Company, Inc.
7388 North State Highway 95
Columbia, AL 36319

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT - NRC INTEGRATED INSPECTION REPORT 05000348/2014002; AND 05000364/2014002

Dear Ms. Gayheart:

On March 31, 2014, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Joseph M. Farley Nuclear Plant, Units 1 and 2. On April 15, 2014, the NRC inspectors discussed the results of this inspection with you and other members of your staff.

The enclosed inspection report discusses a finding for which the NRC has not yet reached a preliminary significance determination. As described in Section 1R12 of the enclosed inspection report, the "1B" emergency diesel generator (EDG) sequencer failed to initiate during surveillance testing due to a faulted mechanism operated cell (MOC) switch in the "1B" EDG 4160V output breaker. This finding resulted in an immediate safety concern for which proper compensatory measures were taken. The licensee replaced the faulted MOC switch in the "1B" EDG output breaker and inspected the remaining EDG output breakers. Additionally, the licensee developed a plan to inspect and replace all potentially affected MOC switches in safety related 4160V breakers. The NRC will inform you in a separate correspondence when the preliminary significance has been determined.

We intend to complete and issue our final safety significance determination within 90 days from the date of this letter. The NRC's significance determination process (SDP) is designed to encourage an open dialogue between your staff and the NRC; however, the dialogue should not affect the timeliness of our final determination. Because the NRC has not made a final determination in this matter, no notice of violation is being issued for this inspection finding at this time.

NRC inspectors documented three findings of very low safety significance (Green) in this report. These findings involved violations of NRC requirements. Further, inspectors documented a licensee-identified violation which was determined to be of very low safety significance in this report. The NRC is treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2.a of the Enforcement Policy.

If you contest the violations or significance of these 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 II; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC resident inspector at the Joseph M. Farley Nuclear 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 II; and the NRC resident inspector at Joseph M. Farley Nuclear Plant.

Additionally, as we informed you in the most recent NRC integrated inspection report, cross-cutting aspects identified in the last six months of 2013 using the previous terminology were being converted in accordance with the cross-reference in Inspection Manual Chapter 0310. Section 4OA5 of the enclosed report documents the conversion of these cross-cutting aspects which will be evaluated for cross-cutting themes and potential substantive cross-cutting issues in accordance with IMC 0305 starting with the 2014 mid-cycle assessment review. If you disagree with the cross cutting aspect assigned, 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 II, and the NRC resident inspector at the Farley Nuclear Plant.

In accordance with Title 10 of the Code of Federal Regulations 2.390, “Public Inspections, Exemptions, Requests for Withholding,” of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC’s Public Document Room or from the Publicly Available Records (PARS) component of NRC’s Agencywide 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/

Frank Ehrhardt, Chief
Reactor Projects Branch 2
Division of Reactor Projects

Docket Nos.: 50-348, 50-364
License No.: NPF-2, NPF-8

Enclosure: Inspection Report 05000348/2014002; and 05000364/2014002
w/Attachment: Supplemental Information

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Letter to C. A. Gayheart from Frank Ehrhardt dated May 14, 2014

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT - NRC INTEGRATED INSPECTION REPORT 05000348/2014002; AND 05000364/2014002

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REGION II

Docket Nos.:	05000348, 05000364
License Nos.:	NPF-2, NPF-8
Report No.:	05000348/2014002; and 05000364/2014002
Licensee:	Southern Nuclear Operating Company, Inc.
Facility:	Joseph M. Farley Nuclear Plant, Units 1 and 2
Location:	Columbia, AL
Dates:	January 1, 2014 through March 31, 2014
Inspectors:	P. Niebaum, Senior Resident Inspector J. Sowa, Resident Inspector A. Alen, Reactor Inspector S. Sandal, Senior Project Engineer B. Collins, Reactor Inspector (1R07) A. Vargas, Reactor Inspector (4AO5)
Approved by:	Frank Ehrhardt, Chief Reactor Projects Branch 2 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000348/2014002 and 05000364/2014002; 01/01/2014 – 03/31/2014; Joseph M. Farley Nuclear Plant, Units 1 and 2, Adverse Weather Protection, Maintenance Effectiveness, Operability Determinations and Functionality Assessments, Post Maintenance Testing

The report covered a three-month period of inspection by resident and regional inspectors. There was one apparent violation, one NRC identified violation and two self-revealing violations documented in this report. The significance of inspection findings are indicated by their color (i.e. greater than Green, or Green, White, Yellow, Red) and determined using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP) dated June 2, 2011. The cross-cutting aspects were determined using IMC 0310, "Aspects Within The Cross-Cutting Areas" dated January 1, 2014. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy dated January 28, 2013. The NRC's program for overseeing the safe operations of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 5.

Cornerstone: Initiating Events

- Green. A self-revealing non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified for the licensee's failure to implement cold weather preparation procedures prior to the onset of anticipated below-freezing temperatures. Specifically, the licensee did not identify and correct missing insulation for the sensing lines associated with the Unit 2 steam line pressure transmitters (PTs) 494, 495, and 496 as required by station procedure FNP-2-EMP-1383.01, "Freeze Protection Inspections." As a result, the PT-496 output signal failed low during below-freezing temperatures on January 7, 2014. The licensee entered this issue into their corrective action program as condition report (CR) 754183, restored operability of PT-496, and installed a tarp and heat lamps as compensatory measures for the missing insulation.

  The failure to identify and correct missing insulation associated with PTs 494, 495, and 496, as required by FNP-2-EMP-1383.01 prior to the onset of cold weather, was a performance deficiency. The performance deficiency was more than minor because it could reasonably be viewed as a precursor to a significant event. Specifically, the failure to protect the sensing lines of these pressure transmitters from below-freezing temperatures resulted in a low output signal of pressure transmitter PT-496 as evidenced on January 7, 2014 and could have resulted in an unnecessary safety injection and reactor trip of Unit 2. The significance of this finding was screened under the initiating events cornerstone using IMC 0609 Attachment 4, "Initial Characterization of Findings," issued June 19, 2012 and IMC 0609 Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," issued June 19, 2012. The finding screened as Green (i.e. very low safety significance) because it did not cause a reactor trip. The inspectors determined the finding had a cross-cutting aspect of "procedure adherence" in the human performance area because plant staff failed to comply with written procedures and identify equipment deficiencies prior to the onset of cold weather. [H.8] (Section 1R01)

Cornerstone: Mitigating Systems

- TBD. An apparent violation (AV) of Technical Specification (TS) 5.4.1.a, "Procedures," was identified for the licensee's failure to perform preventive maintenance on safety-related 4160V breaker MOC switches in accordance with FNP-0-EMP-1313.12, "Maintenance of Siemens-Allis 4.16kv Metal-Clad Switchgear MOC Switch". Specifically, the licensee did not lubricate 4160V breaker MOC switches in accordance with station procedure FNP-0-EMP-1313.12. The licensee entered this issue into their corrective action program as CR 713134 and replaced the affected MOC switches.

  The failure to perform preventive maintenance on safety-related 4160V breaker MOC switches in accordance with FNP-0-EMP-1313.12, "Maintenance of Siemens-Allis 4.16kv Metal-Clad Switchgear MOC Switch," was a performance deficiency. The performance deficiency was more than minor because it adversely affected the equipment performance attribute of the mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the failure to perform preventive maintenance procedure FNP-0-EMP-1313.12 adversely affected the reliability and capability of safety-related 4160V MOC switches, as evidenced by the B1G sequencer MOC switch failure on October 4, 2013. The inspectors evaluated the finding using IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," issued June 19, 2012. A detailed risk analysis was required by a NRC Senior Reactor Analyst because the finding represented an actual loss of function of at least a single train for greater than its TS-allowed outage time. The finding could not be screened to Green and is pending a final significance determination. The inspectors determined the finding had a cross-cutting aspect of "teamwork" in the human performance area because the licensee did not communicate and coordinate activities within and across organizational boundaries to ensure nuclear safety is maintained. Specifically, the licensee did not coordinate implementation of MOC switch preventive maintenance procedure FNP-0-EMP-1313.12 and the appropriate preventive maintenance "rep-task" was not created for these MOC switches. [H.4] The associated cross-cutting aspect is conditional on the final significance determination being White, Yellow or Red. (Section 1R12)

- Green. The inspectors identified an NCV of 10 CFR 50 Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified for the licensee's failure to include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished. Specifically, licensee procedures FNP-1-STP-1.0 and FNP-2-STP-1.0, "Operations Daily and Shift Surveillance Requirements," did not include acceptance criteria for the intermediate range (IR) neutron flux channel check required by technical specifications (TS). The licensee entered this issue into their corrective action program as CR 775544 and was evaluating corrective actions.

  The failure to include appropriate qualitative or quantitative acceptance criteria for the IR nuclear instruments channel check surveillance was a performance deficiency. The performance deficiency was more than minor because it adversely affected the procedure quality attribute of the mitigating systems cornerstone to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the lack of qualitative or quantitative acceptance criteria for the

IR channel check impacted the determination of continued operability of the NI-36 instrument channel during the reactor startup. This finding was evaluated using IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," issued June 19, 2012. This finding screened to Green because the questions listed under the Reactivity Control Systems in Exhibit 2, Mitigating Systems Screening Questions of IMC 0609, Appendix A, were answered "No". The inspectors determined the finding had a cross-cutting aspect of "resources" in the human performance area because procedures did not have adequate acceptance criteria to perform TS required IR neutron flux channel checks. [H.1] (Section 1R15)

- Green. A self-revealing NCV of TS 5.4.1.c, "Fire Protection Program Implementation," was identified for the licensee's failure to establish and implement adequate procedures required to maintain functionality of the Unit 2 auxiliary building fire protection system (pyro panel). On January 18, 2014, the operations shift crew determined the Unit 2 pyro panel was non-functional when multiple suppression alarms came in on a main control room panel and all of the detection alarms came in on Unit 2 pyro panel. The licensee entered this issue into their corrective action program as CR 760108 and established continuous fire watches, as compensatory measures, until the Unit 2 pyro panel was returned to service on January 20, 2014.

  The failure to establish and implement adequate procedures to maintain functionality of the Unit 2 auxiliary building fire protection pyro panel was a performance deficiency. The performance deficiency was more than minor because it adversely affected the protection against external factors (fire) attribute of the mitigating systems cornerstone objective to ensure the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to establish and implement adequate procedures to maintain functionality of the Unit 2 auxiliary building fire protection pyro panel led to a degraded fire indicating unit, which resulted in a non-functional Unit 2 fire protection pyro panel and certain auxiliary building fire detection systems. The finding was evaluated using IMC 0609, Appendix F, "Fire Protection Significance Determination Process," issued September 20, 2013. According to question 1.4.2-G, the finding screened to Green because the Unit 2 auxiliary building suppression system was still able to suppress a fire such that no additional equipment important to safety would be affected by a fire. The inspectors determined the finding had a cross-cutting aspect of "change management" in the human performance area, because licensee staff failed to maintain functionality of the Unit 2 pyro panel before a design change could be implemented. [H.3] (Section 1R19)

Violations of very low safety significance that were identified by the licensee have been reviewed by the NRC. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. These violations and corrective action tracking numbers are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

Unit 1 maintained approximately 100 percent rated thermal power (RTP) during the report period.

Unit 2 started the report period at approximately 100 percent RTP. On January 11, Unit 2 began reducing reactor power in preparation to shutdown to comply with technical specification action statements for an inoperable solid state protection system (SSPS) train. Unit 2 entered Mode 3 on January 11 and cooled down to Modes 4 and 5 on January 12. The licensee performed a reactor startup on January 14 following repairs to "B" train SSPS. Unit 2 achieved approximately 100 percent RTP on January 15. On March 8, Unit 2 reduced power to 60 percent RTP to replace a solenoid valve on the "2B" steam generator feed pump (SGFP) high pressure stop valve. Following repairs to the "2B" SGFP, Unit 2 returned to 100 percent RTP later that same day. Unit 2 maintained approximately 100 percent RTP for the remainder of the report period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

a. Inspection Scope

.1 Seasonal Extreme Weather Conditions

The inspectors conducted a detailed review of the station's adverse weather procedures written for extreme low temperatures. The inspectors verified that weather-related equipment deficiencies identified during the previous year had been placed into the work control process or corrected prior to the onset of seasonal extremes. The inspectors evaluated the licensee's implementation of adverse weather preparation procedures and compensatory measures before the onset of and during seasonal extreme weather conditions. Documents reviewed are listed in the Attachment.

The inspectors evaluated the following risk-significant systems:

- Auxiliary feedwater supply from condensate storage tanks, Units 1 and 2
- Main steam valve room, main steam pressure instruments, Unit 2

b. Findings

Introduction: A self-revealing NCV of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified for the licensee's failure to implement cold weather preparation procedures prior to the onset of anticipated below-freezing temperatures. Specifically, the licensee did not identify and correct missing insulation for the sensing lines associated with Unit 2 steam line pressure transmitters (PTs) 494, 495, and 496 as required by station procedure FNP-2-EMP-1383.01, "Freeze Protection

Inspections," Version 16.0. As a result, during below-freezing temperatures on January 7, 2014, the sensing line for PT-496 froze and the output failed low tripping its associated protective channel, which provided an input to the Unit 2 engineered safeguards feature (ESF) logic.

Description: During below-freezing temperatures on January 7, 2014, the licensee declared pressure transmitter PT-496 inoperable because of a low output signal. The pressure trace of the instrument revealed that the instrument initially failed high and then failed low, where it remained until it was restored to an operable status. A licensee engineering evaluation, documented in CR 752957, described the malfunction as indicative of a frozen slug in the sensing line. The licensee inspected the affected equipment and determined that insulation was missing from the sensing lines for "C" steam generator PTs 494, 495, and 496. Licensee procedure FNP-0-SOP-0.12, "Cold Weather Contingencies," Version 19.0, required the licensee to perform cold weather equipment walk-downs in accordance with procedures FNP-1/2-EMP-1383.01 to identify and resolve issues associated with the freeze protection system or establish compensatory measures. Step 7.2.7.1 of FNP-2-EMP-1383.01, required the licensee to verify that none of the pipe insulating material appeared to be missing or damaged and to repair or replace insulation as necessary. The licensee did not identify and did not correct missing insulation for PT-494, 495, and 496 sensing lines prior to the onset of cold weather. As a result, the PT-496 sensing line froze and the instrument's output failed low on January 7, 2014. The safety injection (SI) actuation logic uses a two-out-of-three protective channels logic scheme for the high steam line differential pressure function. PT-494, 495 and 496 provide inputs to each of the three protection sets. If another pressure transmitter (PT-494 or 495) had failed low while the PT-496 sensing line was frozen, Unit 2 would have experienced a safety injection and reactor trip.

Analysis: The failure to identify and correct missing insulation associated with the PT 494, 495, and 496 sensing lines as required by FNP-2-EMP-1383.01 prior to the onset of cold weather was a performance deficiency. The performance deficiency was more than minor because it could reasonably be viewed as a precursor to a significant event. Specifically, the failure to protect the sensing lines of these pressure transmitters from below freezing temperatures resulted in a low output signal of pressure transmitter PT-496 as evidenced on January 7, 2014, and could have resulted in an unnecessary safety injection and reactor trip of Unit 2. The significance of this finding was screened under the initiating events cornerstone using IMC 0609 Attachment 4, "Initial Characterization of Findings" issued June 19, 2012, and IMC 0609 Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," issued June 19, 2012. The finding screened as Green because it did not cause a reactor trip. The inspectors determined the finding had a cross-cutting aspect of "procedure adherence" in the human performance area because plant staff failed to comply with written procedures and identify equipment deficiencies prior to the onset of cold weather. [H.8]

Enforcement: 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," required, in part, that activities affecting quality shall be accomplished in accordance with procedures. Licensee procedure FNP-2-EMP-1383.01, "Freeze Protection Inspections," required the licensee to identify and correct damaged or missing pipe insulating material prior to the onset of cold weather conditions. Contrary to the

above, prior to January 7, 2014, the licensee failed to accomplish activities in accordance with the procedure. Specifically, the licensee did not identify and correct missing insulation for the sensing lines associated with the Unit 2 steam line PTs 494, 495, and 496. This resulted in a low output signal and inoperability of PT-496 on January 7, 2014. The licensee restored operability of PT-496 and installed a tarp and heat lamps as compensatory measures for the missing insulation. This violation is being treated as a NCV, consistent with Section 2.3.2 of the Enforcement Policy. The violation was entered into the licensee's corrective action program as CR 754183. (NCV 05000364/2014002-01, "Failure to Properly Conduct Cold Weather Contingency Procedures."

1R04 Equipment Alignment (71111.04)

a. Inspection Scope

Complete Walkdown

The inspectors verified the alignment of the Unit 2 residual heat removal (RHR) system. The inspectors selected this system for assessment because it is a risk-significant mitigating system. The inspectors determined the correct system lineup by reviewing plant procedures, drawings, the updated final safety analysis report, and other documents. In order to identify any deficiencies that could affect the ability of the system to perform its function(s), the inspectors reviewed records related to outstanding design issues and maintenance work requests. The inspectors verified that the selected system was correctly aligned by performing a complete walkdown of accessible components.

To verify the licensee was identifying and resolving equipment alignment discrepancies, the inspectors reviewed corrective action documents, including condition reports and outstanding work orders. The inspectors also reviewed periodic reports containing information on the status of risk-significant systems, including maintenance rule reports and system health reports. Documents reviewed are listed in the Attachment.

Partial Walk-Down:

The inspectors verified that critical portions of the selected systems were correctly aligned by performing partial walkdowns. The inspectors selected systems for assessment because they were a redundant or backup system or train, were important for mitigating risk for the current plant conditions, had been recently realigned, or were a single-train system. The inspectors determined the correct system lineup by reviewing plant procedures and drawings. Documents reviewed are listed in the Attachment.

The inspectors selected the following four system/trains to inspect:

- Unit 2 turbine driven auxiliary feedwater pump
- Unit 2 "2B" emergency diesel generator (EDG) with "1-2A" EDG out of service
- Unit 1 "1B" 125VDC switchgear with "1A" battery charger out of service
- Unit 1 "1B" EDG with "1-2A" EDG out of service

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05AQ)

a. Inspection Scope

Quarterly Inspection

The inspectors evaluated the adequacy of selected fire plans by comparing the fire plans to the defined hazards and defense-in-depth features specified in the fire protection program. In evaluating the fire plans, the inspectors assessed the following items:

- control of transient combustibles and ignition sources
- fire detection systems
- water-based fire suppression systems
- gaseous fire suppression systems
- manual firefighting equipment and capability
- passive fire protection features
- compensatory measures and fire watches
- issues related to fire protection contained in the licensee's corrective action program.

The inspectors toured the following six fire areas to assess material condition and operational status of fire protection equipment. Documents reviewed are listed in the Attachment.

- Unit 1 "A" train battery room – fire area 17
- Unit 1 "B" train battery room – fire area 16
- Unit 1 "A" train 125VDC switchgear room – fire area 18
- Unit 1 "B" train 125VDC switchgear room – fire area 19
- Unit 2 "2B" EDG room – fire area 59
- Unit 2 "A", "B", and "C" charging/safety injection pump rooms – fire area 2-5

b. Findings

No findings were identified.

1R07 Heat Sink Performance (71111.07T)

.1 Triennial Review of Heat Sink Performance

a. Inspection Scope

The inspectors reviewed operability determinations, completed surveillances, vendor manual information, associated calculations, performance test results, and cooler inspection results associated with the heat exchangers listed below. These heat

exchangers/coolers were chosen based on their risk significance in the licensee's probabilistic risk analysis, their important safety-related mitigating system support functions, and their relatively low margin.

- Unit 1 component cooling water heat exchanger "1B"
- Unit 2 charging pump room cooler "1B"
- Emergency diesel generator "2B" jacket water cooler

For these three heat exchangers, the inspectors determined whether testing, inspection, maintenance, and monitoring of biotic fouling and macrofouling programs were adequate to ensure proper heat transfer. This was accomplished by determining whether the test method used was consistent with accepted industry practices, or equivalent, the test conditions were consistent with the selected methodology, the test acceptance criteria were consistent with the design basis values, and reviewing results of heat exchanger performance testing. The inspectors also determined whether the test results appropriately considered differences between testing conditions and design conditions, the frequency of testing based on trending of test results was sufficient to detect degradation prior to loss of heat removal capabilities below design basis values, and test results considered test instrument inaccuracies and differences.

For these three heat exchangers, the inspectors also reviewed the methods and results of heat exchanger performance inspections. The inspectors determined whether the methods used to inspect and clean heat exchangers were consistent with as-found conditions identified and expected degradation trends and industry standards, the licensee's inspection and cleaning activities had established acceptance criteria consistent with industry standards, and the as-found results were recorded, evaluated, and appropriately dispositioned so that the as-left condition was acceptable.

In addition, the inspectors determined whether the condition and operation of these three heat exchangers were consistent with design assumptions in heat transfer calculations, and as described in the final safety analysis report. This included determining whether the number of plugged tubes was within pre-established limits based on capacity and heat transfer assumptions. The inspectors determined whether the licensee evaluated the potential for water hammer and established adequate controls and operational limits to prevent heat exchanger degradation due to excessive flow induced vibration during operation. The inspectors also reviewed eddy current test reports and visual inspection records to determine the structural integrity of the heat exchangers.

The inspectors determined whether the performance of ultimate heat sinks (UHS), and their subcomponents such as piping, intake screens, pumps, valves, etc., was appropriately evaluated by tests or other equivalent methods, to ensure availability and accessibility to the in-plant cooling water systems.

The inspectors determined whether the licensee's inspection of the UHS was thorough and of sufficient depth to identify degradation of the shoreline protection or loss of structural integrity. This included determination whether vegetation present along the

slopes was trimmed, maintained, and was not adversely impacting the embankment. In addition, the inspectors determined whether the licensee ensured sufficient reservoir capacity by trending and removing debris, or sediment buildup, in the UHS.

The inspectors performed a system walkdown of the service water intake structure to determine whether the licensee's assessment of structural integrity and component functionality was adequate and that the licensee ensured proper functioning of traveling screens and strainers, and structural integrity of component mounts. In addition, the inspectors determined whether service water pump bay silt accumulation was monitored, trended, and maintained at an acceptable level by the licensee, and that water level instruments were functional and routinely monitored. The inspectors also determined whether the licensee's ability to ensure functionality during adverse weather conditions was adequate.

In addition, the inspectors reviewed condition reports related to the heat exchangers/coolers and heat sink performance issues to determine whether the licensee had an appropriate threshold for identifying issues and to evaluate the effectiveness of the corrective actions. Documents reviewed are listed in the Attachment.

These inspection activities constituted four heat sink inspection samples as defined in IP 71111.07-05.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program (71111.11)

a. Inspection Scope:

.1 Resident Inspector Quarterly Review of Licensed Operator Requalification

The inspectors observed an evaluated simulator scenario administered to an operating crew conducted in accordance with the licensee's accredited requalification training program on March 13, 2014.

The inspectors assessed the following:

- licensed operator performance
- the ability of the licensee to administer the scenario and evaluate the operators
- the quality of the post-scenario critique
- simulator performance

Documents reviewed are listed in the Attachment.

.2 Resident Inspector Quarterly Review of Licensed Operator Performance

The inspectors observed licensed operator performance in the main control room during a Unit 2 reactor shutdown on January 11, 2014.

The inspectors assessed the following:

- use of plant procedures
- control board manipulations
- communications between crew members
- use and interpretation of instruments, indications, and alarms
- use of human error prevention techniques
- documentation of activities
- management and supervision

Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors assessed the licensee's treatment of the two issues listed below in order to verify the licensee appropriately addressed equipment problems within the scope of the maintenance rule (10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants"). The inspectors reviewed procedures and records to evaluate the licensee's identification, assessment, and characterization of the problems as well as their corrective actions for returning the equipment to a satisfactory condition. The inspectors also interviewed system engineers to assess the accuracy of equipment deficiencies and extent of condition. Documents reviewed are listed in the Attachment.

- Unit 1 "1B" EDG mechanism operated cell (MOC) switch failure during FNP-1-STP-40.0B (SI/LOSP Test)
- Unit 1 "1B" RHR Pump maintenance rule (a)(1) plan for exceeding unavailability hours

b. Findings

Introduction: An apparent violation (AV) of Technical Specification 5.4.1.a, "Procedures," was identified for the licensee's failure to perform preventive maintenance on safety-related 4160V breaker MOC switches in accordance with FNP-0-EMP-1313.12,

"Maintenance of Siemens-Allis 4.16kv Metal-Clad Switchgear MOC Switch". Specifically, the licensee did not lubricate 4160V breaker MOC switches in accordance with station procedure FNP-0-EMP-1313.12.

Description: On October 4, 2013, during performance of a Technical Specification (TS) required surveillance per licensee procedure FNP-1-STP-40.0B, "Safety Injection with Loss of Offsite Power Test – B Train," the B1G sequencer did not actuate as expected. The "1B" EDG output breaker (DG08) is a Cutler Hammer 4160V breaker that actuates a mechanism operated cell (MOC) switch. This MOC switch actuates the B1G sequencer that loads ESF equipment in a predetermined sequence and prevents diesel overload during design based accidents. Typically, when the "1B" EDG is required to start, the "1B" EDG output breaker closes so the "1B" EDG can provide emergency power to the "1G" 4160V bus. When the EDG output breaker closes, the MOC switch actuates and begins sequencing ESF loads. Verification of MOC switch actuation can be observed locally when the breaker "sure-closure fork" lifts the MOC switch "torpedo" which rotates the contacts on the MOC switch.

The licensee determined that the MOC switch inside the "1B" EDG DG08 breaker cubicle failed to operate when the breaker closed. The licensee immediately replaced the MOC switch in breaker DG08, as well as the breaker, and quarantined both for further evaluation. During extent-of-condition investigations, the licensee identified two additional failed MOC switches associated with the "2D" and "1E" service water pump 4160V breakers. The licensee sent these three failed MOC switches to an offsite vendor for independent destructive testing and failure analysis. The licensee's root cause analysis, which incorporated data and findings from the vendor's destructive testing report, concluded that the lack of lubrication between the MOC switch bushings and the housing was the direct cause of the MOC switch failure.

The licensee scheduled MOC switch preventive maintenance on a nine year frequency in accordance with Attachment 1 of FNP-0-EMP-1313.04, "Maintenance of Siemens-Allis 4.16kv Metal-Clad Switchgear," dated January 5, 2000. The Attachment 1 of MOC switch preventive maintenance requirement was replaced with FNP-0-EMP-1313.12, "Maintenance of Siemens-Allis 4.16kV Metal-Clad Switchgear MOC Switch," on March 25, 2002. The licensee never created a task for this revised procedure and never scheduled or performed the required MOC switch preventive maintenance. The licensee entered this issue into the corrective action program as CR 713134.

Analysis: The failure to perform preventive maintenance on safety-related 4160V breaker MOC switches in accordance with FNP-0-EMP-1313.12, "Maintenance of Siemens-Allis 4.16kv Metal-Clad Switchgear MOC Switch" was a performance deficiency. The performance deficiency was more than minor because it adversely affected the equipment performance attribute of the mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the failure to perform preventive maintenance procedure FNP-0-EMP-1313.12 adversely affected the reliability and capability of safety-related 4160V MOC switches, as evidenced by the B1G sequencer MOC switch failure on October 4, 2013. The inspectors evaluated the finding using IMC 0609, Appendix A, "The Significance

Determination Process (SDP) for Findings At-Power," issued June 19, 2012. A detailed risk analysis was required by an NRC Senior Reactor Analyst because the finding represented an actual loss of function of at least a single train for greater than its TS-allowed outage time. The finding could not be screened to Green and is pending a final significance determination.

The inspectors determined the finding had a cross-cutting aspect of "teamwork" in the human performance area, because the licensee did not communicate and coordinate activities within and across organizational boundaries to ensure nuclear safety is maintained. Specifically, the licensee did not coordinate implementation of MOC switch preventive maintenance procedure FNP-0-EMP-1313.12 and did not create the appropriate preventive maintenance "rep-task" for these MOC switches. The cross-cutting aspect was indicative of present performance because the licensee failed to identify this issue during their triennial preventive maintenance bases reviews. [H.4] The associated cross-cutting aspect is conditional on the final significance determination being White, Yellow or Red.

Enforcement: Technical Specification 5.4.1.a required that written procedures, specified in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978, shall be established, implemented, and maintained. Regulatory Guide 1.33 stated that maintenance activities that can affect the performance of safety-related equipment should be performed in accordance with written procedures, documented instructions, or drawings appropriate to the circumstances. Contrary to the above, since March 2002, station personnel failed to implement preventive maintenance procedure FNP-0-EMP-1313.12, "Maintenance of Siemens-Allis 4.16kv Metal-Clad Switchgear MOC Switch" on safety-related 4160V MOC switches. As a result of not performing this procedure, safety-related MOC switches were not properly lubricated and sequencer B1G did not actuate. This prevented emergency diesel generator 1B from loading during the performance of FNP-1-STP-40.0B (SI/LOSP test) on October 4, 2013. The licensee replaced the "1B" EDG output breaker and its associated MOC switch. This issue was placed in the licensee's corrective action program as CR 713134. This issue is being documented as an apparent violation pending a final significance determination. (AV 05000348, 05000364/2014002-02; Failure to Implement Preventive Maintenance on 4160V Breaker Mechanism Operated Cell Switches).

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

a. Inspection Scope

The inspectors reviewed the five maintenance activities listed below to verity the licensee assessed and managed plant risk as required by 10 CFR 50.65(a)(4) and licensee procedures. The inspectors assessed the adequacy of the licensee's risk assessments and implementation of risk management actions. The inspectors also verified that the licensee was identifying and resolving problems with assessing and managing maintenance-related risk using the corrective action program. Additionally, for maintenance resulting from unforeseen situations, the inspectors assessed the effectiveness of the licensee's planning and control of emergent work activities. Documents reviewed are listed in the Attachment.

- Unit 1, January 22, yellow risk during planned maintenance on “1B” spent fuel pool pump
- Unit 2, February 10, elevated green risk condition for “1-2A” EDG maintenance
- Unit 2, February 11, yellow risk during planned maintenance on “2B” spent fuel pool pump
- Unit 1, March 14, elevated green risk condition during emergent issues with phase 3 main power transformer
- Unit 2, March 15, elevated green risk during planned maintenance on the 500kV Raccoon Creek line

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15)

a. Inspection Scope

The inspectors selected the seven operability determinations or functionality evaluations listed below for review based on the risk-significance of the associated components and systems. The inspectors reviewed the technical adequacy of the determinations to ensure that technical specification operability was properly justified and the components or systems remained capable of performing their design functions. To verify whether components or systems were operable, the inspectors compared the operability and design criteria in the appropriate sections of the technical specification and updated final safety analysis report to the licensee’s evaluations. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled. Additionally, the inspectors reviewed a sample of corrective action documents to verify the licensee was identifying and correcting any deficiencies associated with operability evaluations. Documents reviewed are listed in the Attachment.

- CR 741048, Unit 2 “2A” component cooling water pump inboard bearing oil sample was discolored
- CR 636049, Unit 2 Erratic indication of intermediate range channel NI-36
- CR 741001, Unit 1 Abnormal flow obtained during “1B” RHR pump surveillance
- CR 779624, Unit 1 Containment pressure transmitter PT-952 diverging in high direction
- CR 790183, Unit 2 Underground leak of service water piping
- CR 792227, Unit 2 Reactor coolant system flow transmitter FT-436 inconsistent with scaling document
- CR 766010, Unit 1 Broken wire in the “1B” motor-driven auxiliary feedwater pump breaker cubicle

b. Findings

Introduction: The inspector identified a Green NCV of 10 CFR 50 Appendix B, Criterion V, "Instructions, Procedures and Drawings," for the licensee's failure to include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished. Specifically, licensee procedures FNP-1-STP-1.0 and FNP-2-STP-1.0, "Operations Daily and Shift Surveillance Requirements," did not include acceptance criteria for the intermediate range (IR) neutron flux channel check required by TS.

Description: Technical Specification Limiting Condition of Operation (LCO) 3.3.1, "Reactor Trip System Instrumentation," requires two IR nuclear instrument channels (NI-35 and NI-36) to be operable in Modes 1, below P-10 setpoint, and in Mode 2. The IR neutron flux trip function ensures that protection is provided against an uncontrolled rod cluster control assembly (RCCA) bank rod withdrawal accident from a subcritical condition during startup. During the Unit 2 reactor startup on January 14, 2014, the inspectors observed erratic indications at low power levels on NI-36 and questioned the operability of the IR channel. Specifically, the inspectors observed that NI-36 remained at the lowest indicated value, approximately 1.0E-11 amps, while NI-35 tracked with the increasing source range nuclear instrument channels. The inspectors also observed that NI-36 did not track with the source range nuclear instruments and came on scale after the source range instruments were de-energized (above the P-6 permissive setpoint) and when NI-35 was reading approximately 1.0E-8. The inspectors reviewed licensee procedures FNP-1-STP-1.0 and FNP-2-STP-1.0, "Operations Daily and Shift Surveillance Requirements," Versions 107.1 and 96.0, respectively, which the licensee used to satisfy the channel check requirement per TS Surveillance Requirement (SR) 3.3.1.1. The inspectors discovered that the procedure did not include qualitative or quantitative acceptance criteria for this channel check in Section 51, "Intermediate Range Neutron Flux (amps)," of Appendix 1. Farley TS Section 1.1, "Definitions," defined a channel check as a "qualitative assessment, by observation, of channel behavior during operation. This determination shall include, where possible, comparison of the channel indication and status to other indications or status derived from independent instrument channels measuring the same parameter." Also, Farley TS bases for SR 3.3.1.1 described a channel check as a comparison of the parameter indicated on one channel to a similar parameter on other channels. It further stated that a channel check is based on the assumption that instrument channels monitoring the same parameter should read approximately the same value.

Analysis: The failure to include appropriate qualitative or quantitative acceptance criteria for the IR nuclear instruments channel check surveillance was a performance deficiency. The performance deficiency was more than minor because it adversely affected the procedure quality attribute of the mitigating systems cornerstone to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the lack of qualitative or quantitative acceptance criteria for the IR channel check impacted the determination of continued operability of the NI-36 instrument channel during the reactor startup. This finding was evaluated using IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," issued June 19, 2012. This finding screened to Green because

the questions listed under the "Reactivity Control Systems," in Exhibit 2, "Mitigating Systems Screening Questions," of IMC 0609, Appendix A, were answered "No." The inspectors determined the finding had a cross-cutting aspect of "resources" in the human performance area, because the procedures that implemented TS required surveillances (channel checks) were not adequate. [H.1]

Enforcement: 10 CFR 50, Appendix B, Criterion V "Instructions, Procedures and Drawings," required in part, that instructions, procedures or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished. The licensee used procedures FNP-1-STP-1.0 and FNP-2-STP-1.0, "Operations Daily and Shift Surveillance Requirements," to perform the TS required channel check surveillance. Contrary to the above, licensee procedures FNP-1-STP-1.0 and FNP-2-STP-1.0 did not include appropriate quantitative or qualitative acceptance criteria for the IR channel check. This violation has existed at least since June 13, 2000 with revision 70 of FNP-1-STP-1.0 and June 1, 2000 with revision 56 of FNP-2-STP-1.0. Corrective actions were in progress to evaluate the lack of acceptance criteria for the channel check of the IR nuclear instruments and other channel checks contained in FNP-2-STP-1.0 and FNP-1-STP-1.0. This violation is being treated as an NCV, consistent with Section 2.3.2 of the Enforcement Policy. The violation was entered into the licensee's corrective action program as CR 775544. (NCV 05000348 and 364/2014002-03, "Lack of Acceptance Criteria for Nuclear Instrument Channel Checks").

1R18 Plant Modifications (71111.18)

a. Inspection Scope

The inspectors verified that the plant modification listed below did not affect the safety functions of important safety systems. The inspectors confirmed the modifications did not degrade the design bases, licensing bases, and performance capability of risk significant structures, systems and components. The inspectors also verified modifications performed during plant configurations involving increased risk did not place the plant in an unsafe condition. Additionally, the inspectors evaluated whether system operability and availability, configuration control, post-installation test activities, and changes to documents, such as drawings, procedures, and operator training materials, complied with licensee standards and NRC requirements. In addition, the inspectors reviewed a sample of related corrective action documents to verify the licensee was identifying and correcting any deficiencies associated with modifications. Documents reviewed are listed in the Attachment.

Permanent Plant Modifications

- SNC88029, 2B EDG Temperature Switch Replacement

b. Findings

No findings were identified.

1R19 Post Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors either observed post-maintenance testing or reviewed the test results for the six maintenance activities listed below to verify the work performed was completed correctly and the test activities were adequate to verify system operability and functional capability.

- Work Order: SNC 544534, "Corrective Maintenance on "B" train Solid State Protective System (SSPS)," Unit 2
- FNP-0-STP-80.2, "Diesel Generator "1C" Operability Test," following replacement of MOC switch
- FNP-0-STP-80.1, "Diesel Generator "1-2A" Operability Test," following replacement of automatic field flashing (K2) relay
- FNP-2-STP-80.1, "Diesel Generator "2B" Operability Test," following 2 year preventive maintenance outage
- Work Order: SNC 546407, "Corrective Maintenance on the Unit 2 Auxiliary Building Fire Protection System"
- Work Order: SNC 540080, "Corrective Maintenance on the Unit 1 Residual Heat Removal Heat Exchanger Discharge Valve (HCV-603B)"

The inspectors evaluated these activities for the following:

- Acceptance criteria were clear and demonstrated operational readiness
- Effects of testing on the plant were adequately addressed
- Test instrumentation was appropriate
- Tests were performed in accordance with approved procedures
- Equipment was returned to its operational status following testing
- Test documentation was properly evaluated

Additionally, the inspectors reviewed a sample of corrective action documents to verify the licensee was identifying and correcting any deficiencies associated with post-maintenance testing. Documents reviewed are listed in the Attachment.

b. Findings

Introduction: A Green self-revealing NCV of TS 5.4.1.c, "Fire Protection Program Implementation," was identified for the licensee's failure to establish and implement adequate procedures required to maintain functionality of the Unit 2 auxiliary building fire protection system (pyro panel). On January 18, 2014, the operations shift crew determined the Unit 2 pyro panel was non-functional when multiple suppression alarms came in on a main control room panel and all of the detection alarms came in on the Unit 2 pyro panel.

Description: The auxiliary building fire protection pyro panels monitor fire detection equipment, control certain fire suppression system actuation devices (pre-action sprinkler clappers), control local alarm bells for the detection system, and provide information to the operators on the specific origin of a fire or trouble condition. The Unit 2 pyro panel contains a fire indicating unit (FIU) and eighteen (18) zone indicating units (ZIU). The ZIUs monitor detection systems or control the solenoids for pre-action suppression systems. The ZIUs provide alarm and trouble annunciation for individual detection or suppression zones to the FIU. On January 18, 2014, the Unit 2 pyro panel was determined to be non-functional when multiple suppression and all detection systems alarms came in. The affected suppression system isolation valves actuated and were determined to be functional. The associated fire detectors monitored by the eighteen ZIUs were non-functional. As a compensatory measure, the licensee established continuous fire watches in affected areas of the Unit 2 auxiliary building.

The licensee's apparent cause determination, CAR 209119, stated that both Unit 1 and Unit 2 pyro panels have been unreliable over the past year and the unreliable condition has caused the systems to be declared non-functional multiple times. The licensee determined that the direct cause of pyro panel unreliability was a degraded FIU. Following the failure of the Unit 2 pyro panel on January 18, licensee troubleshooting identified a disconnected wire on the 15-amp fuse holder (F1) in the FIU, a degraded FIU relay, and a blown 1-amp fuse (F4). The licensee completed repairs under work order SNC546407 and the Unit 2 pyro panel was returned to service on January 20, 2014. The licensee concluded that the disconnected wire on the FIU caused the loss of power to the Unit 2 pyro panel and resulted in the loss of auxiliary building fire detection. The cause determination did not evaluate the exact cause of the disconnected wire, but considered "component aging" as a potential cause of the degraded FIU.

Farley's fire protection program requirements are contained in Appendix 9B of the updated final safety analysis report (UFSAR). Section 9B.6 of the UFSAR, "Inspection and Testing" states, "plant procedures contain the responsibilities of individuals in connection with routine test and inspections of fire detection, fire suppression, and associated equipment to ensure this equipment is maintained in an operable condition." Section 4.1 of licensee procedure NMP-ES-035-001, "Fire Protection Program Implementation", described key fire protection program attributes and listed equipment reliability under Section 4.1.3. This section required in part, that activities ensure station fire protection features credited in fire protection program analyses are inspected, tested, and maintained so systems will perform their design functions when required. The licensee apparent cause determination identified a contributing cause as the lack of a bridging strategy to ensure the pyro panel remained functional pending a design change. The design change was originally planned to be implemented in 2012, but was deferred to a date yet to be determined. A corrective action was to develop an appropriate bridging strategy to include a monitoring plan for the pyro panels, a preventive maintenance task to monitor the voltage on the pyro panel power supply, and acquire necessary refurbished parts.

Analysis: The failure to establish and implement adequate procedures to maintain functionality of the Unit 2 auxiliary building fire protection pyro panel was a performance deficiency. The performance deficiency was more than minor because it adversely affected the protection against external factors (fire) attribute of the mitigating systems cornerstone objective to ensure the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to establish and implement adequate procedures to maintain functionality of the Unit 2 auxiliary building fire protection pyro panel led to a degraded FIU, which resulted in a non-functional Unit 2 fire protection pyro panel and certain auxiliary building fire detection systems. The inspectors evaluated the finding using IMC 0609, Appendix F, "Fire Protection Significance Determination Process," issued September 20, 2013. According to question 1.4.2-G, the finding screened to Green because the Unit 2 auxiliary building suppression system was still able to suppress a fire such that no additional equipment important to safety would be affected by a fire. The inspectors determined the finding had a cross-cutting aspect of "change management" in the human performance area, because licensee staff failed to maintain functionality of the Unit 2 pyro panel before a design change could be implemented. [H.3]

Enforcement: Technical Specification 5.4.1.c, "Fire Protection Program Implementation," required that written procedures shall be established, implemented, and maintained covering activities of fire protection program implementation. The licensee's fire protection program was described in Appendix 9B of the UFSAR. Section 9B.6, "Inspection and Testing," states that "plant procedures contain the responsibilities of individuals in connection with routine test and inspections of fire detection, fire suppression, and associated equipment to ensure this equipment is maintained in an operable condition." Contrary to the above, since 2012, when the pyro panel design change was deferred, the licensee failed to establish and implement adequate procedures to ensure the Unit 2 auxiliary building fire protection pyro panel was maintained in an operable condition. As a result, on January 18, 2014, the Unit 2 pyro panel lost power and was declared non-functional. The licensee established continuous fire watches, as compensatory measures, until the Unit 2 pyro panel was returned to service on January 20, 2014. A corrective action to develop a bridging strategy to maintain functionality of the Unit 2 auxiliary building fire protection pyro panel pending implementation of a design change was being developed under technical evaluation 779252. This violation is being treated as an NCV, consistent with the Section 2.3.2 of the Enforcement Policy. The violation was entered into the licensee's corrective action program as CR 760108. (NCV 05000364/2014002-04, "Failure to Implement Fire Protection Program Requirements.")

1R20 Refueling and Other Outage Activities (71111.20)

a. Inspection Scope

For the Unit 2 forced outage from January 11 through January 15, the inspectors evaluated the following outage activities:

- shutdown, cooldown, heatup, and startup
- decay heat removal, shutdown cooling
- containment closure

The inspectors verified that the licensee:

- considered risk in developing the outage schedule
- controlled plant configuration in accordance with administrative risk reduction methodologies
- developed mitigation strategies for loss of key safety functions
- adhered to operating license and technical specification requirements

Additionally, inspectors verified that safety-related and risk significant structures, systems, and components not accessible during power operations were maintained in an operable condition. The inspectors also reviewed a sample of related corrective action documents to verify the licensee was identifying and correcting any deficiencies associated with outage activities. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors reviewed the six surveillance tests listed below and either observed the test or reviewed test results to verify testing adequately demonstrated equipment operability and met technical specification and licensee procedural requirements. The inspectors evaluated the test activities to assess for preconditioning of equipment, procedure adherence, and equipment alignment following completion of the surveillance. Additionally, the inspectors reviewed a sample of related corrective action documents to verify the licensee was identifying and correcting any deficiencies associated with surveillance testing. Documents reviewed are listed in the Attachment.

In-Service Tests (IST)

- FNP-2-STP-22.26, Unit 2 – “Turbine Driven Auxiliary Feedwater Pump Quarterly Inservice Test”
- FNP-2-STP-22.1, Unit 2 – “2A Auxiliary Feedwater Pump Quarterly Inservice Test”

Routine Surveillance Tests

- FNP-1-SOP-17.0, Unit 1 – “Main Steam Isolation Valve Partial Stroke Test”
- FNP-1-STP-33.0A, Unit 1 – “Solid State Protection System Train A Operability Test”
- FNP-2-STP-33.2A, Unit 2 – “A Train Reactor Trip Breaker Operability Test”
- FNP-1-STP-80.1, Unit 1 – “Diesel Generator “1B” Operability Test”

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

The inspectors observed the emergency preparedness drill conducted on February 19, 2014. The inspectors observed licensee activities in the simulator and/or technical support center to evaluate implementation of the emergency plan, including event classification, notification, and protective action recommendations. The inspectors evaluated the licensee's performance against criteria established in the licensee's procedures. Additionally, the inspectors attended the post-exercise critique to assess the licensee's effectiveness in identifying emergency preparedness weaknesses and verified the identified weaknesses were entered in the corrective action program. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

a. Inspection Scope

The inspectors reviewed a sample of the performance indicator (PI) data, submitted by the licensee, for the Unit 1 and Unit 2 PIs listed below. The inspectors reviewed plant records compiled between January 2013 and December 2013 to verify the accuracy and completeness of the data reported for the station. The inspectors verified that the PI data complied with guidance contained in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guideline," and licensee procedures. The inspectors verified the accuracy of reported data that were used to calculate the value of each PI. In addition, the inspectors reviewed a sample of related corrective action documents to verify the licensee was identifying and correcting any deficiencies associated with PI data. Documents reviewed are listed in the Attachment.

Cornerstone: Initiating Events

- unplanned scrams per 7,000 critical hours
- unplanned power changes per 7,000 critical hours

Cornerstone: Mitigating Systems

- emergency AC power system

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152)

.1 Routine Review

The inspectors screened items entered into the licensee's corrective action program in order to identify repetitive equipment failures or specific human performance issues for follow-up. The inspectors reviewed condition reports, attended screening meetings, or accessed the licensee's computerized corrective action database.

.2 Operator Work-Around Annual Review

a. Inspection Scope

The inspectors performed a detailed review of the licensee's operator work-around, operator burden, and control room deficiency lists for the station in effect on February 28, 2014, to verify that the licensee identified operator workarounds at an appropriate threshold and entered them in the corrective action program. The inspectors verified that the licensee identified the full extent of issues, performed appropriate evaluations, and planned appropriate corrective actions. The inspectors also reviewed compensatory actions and their cumulative effects on plant operation. Documents reviewed are listed in the Attachment.

b. Findings/Observations

No findings were identified.

4OA3 Follow-up of Events (71153)

.1 (Closed) Licensee Event Report (LER) 05000348/2013-003-00 and -01, 1C Steam Generator Flow Transmitter Inoperable Longer Than Allowed by Technical Specifications

a. Inspection Scope

The inspectors reviewed the LER described above, the apparent cause determination report (CAR 208532) and discussed the issue with licensee staff. On November 5, 2013, with Unit 1 operating in Mode 1 at 100 percent power, engineering personnel performing normalization calculations using beginning-of-cycle power ascension data identified that the "1C" steam generator steam flow transmitter, FT-495, did not meet the

acceptance criteria for normalization. The steam flow instrument, FT-495, was declared inoperable and the required actions of the TS were performed. The steam flow loop was re-calibrated and returned to service on November 6, 2013.

b. Findings

The enforcement aspects of this finding are discussed in Section 4OA7.

.2 (Closed) LERs 05000348/2013-002-00 and -01, 1B Emergency Diesel Generator in a Condition Prohibited by Technical Specifications due to an Unreliable Mechanism Operated Cell Switch

a. Inspection Scope

The inspectors reviewed the LERs described above, the associated causal determination (CAR 208298) and discussed the issue with licensee staff. The licensee determined the direct cause of the B1G sequencer failure to run was due to a failed mechanism operated cell (MOC) switch in the "1B" EDG output breaker DG08. The MOC switch and EDG output breaker DG08 were replaced and the "1B" EDG was returned to service prior to completing the Fall 2013 refueling outage.

b. Findings

The enforcement aspects of this finding are discussed in Section 1R12.

4OA5 Other Activities

.1 Institute of Nuclear Power Operations (INPO) Report Review

In accordance with Executive Director of Operations Procedure 0220, "Coordination with the Institute of Nuclear Power Operations," the inspectors reviewed the most recent INPO evaluation and accreditation reports dated October 2013 and March 2014 respectively, to determine if those reports identified safety or training issues not previously identified by NRC evaluations. The report contained no safety issues that were not already known by the NRC.

.2 Operation of an Independent Spent Fuel Storage Installation (ISFSI) (IP 60855.1)

a. Inspection Scope

The inspectors performed a walkdown of the onsite ISFSI and monitored the activities associated with the dry fuel storage campaign in progress. The inspectors reviewed changes made to the ISFSI programs and procedures, including associated 10 CFR 72.48, "Changes, Tests, and Experiments," screens and evaluations to verify that changes made were consistent with the license or certificate of compliance. The inspectors reviewed records and observed the loading activities to verify that the licensee recorded and maintained the location of each fuel assembly placed in the

ISFSI. The inspectors also reviewed surveillance records to verify that daily surveillance requirements were performed as required by TS. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

.3 (Closed) Temporary Instruction (TI) 2515/182 – Review of the Industry Initiative to Control Degradation of Underground Piping and Tanks

a. Inspection Scope

The inspectors conducted a review of records and procedures related to the licensee's program for buried piping and underground piping and tanks in accordance with Phase II of TI 2515/182 to confirm that the licensee's program contained attributes consistent with Sections 3.3.A and 3.3.B of NEI 09-14, "Guideline for the Management of Buried Piping Integrity," Revision 3, and to confirm that these attributes were scheduled and/or completed by the NEI 09-14 deadlines. The inspectors interviewed licensee staff responsible for the buried piping program and reviewed program related activities to determine if the program attributes were accomplished in a manner which reflected acceptable practices in program management.

The licensee's buried piping and underground piping and tanks program was inspected in accordance with paragraph 03.02.a of the TI and the inspectors confirmed that activities which correspond to completion dates specified in the program, which have passed since the Phase I inspection was conducted, have been completed. The licensee's buried piping and underground piping and tanks program was inspected in accordance with paragraph 03.02.b of the TI and responses to specific questions found in http://www.nrc.gov/reactors/operating/ops-experience/buried-pipe-ti-phase-2-insp-req-2011-11-16.pdf were submitted to the NRC headquarters staff. Additionally, the inspectors reviewed the licensee's risk ranking process and implementation of the inspection plan using the guidance of paragraph 03.04 and 03.05 of the TI.

b. Findings

No findings were identified.

Based upon the scope of the review described above, Phase II of TI-2515/182 was completed.

.4 Cross-Cutting Aspects Common Language Initiative Transition

The table below provides a cross-reference from the 2013 and earlier findings and associated cross-cutting aspects to the new cross-cutting aspects resulting from the common language initiative. These aspects and any others identified since January 2014, will be evaluated for cross-cutting themes and potential substantive cross-cutting

issues in accordance with IMC 0305 starting with the 2014 mid-cycle assessment review.

Finding	Old Cross-Cutting Aspect	New Cross-Cutting Aspect
05000364/2013004-01	H.4(b) Procedural Compliance	H.8 Procedure Adherence
05000348/2013004-02	H.3(b) Work Activity Coordination	H.5 Work Management

4OA6 Meetings, Including Exit

On April 15, 2014, the resident inspectors presented the inspection results to Cheryl Gayheart, Site Vice-president and other members of the licensee's staff. The inspectors confirmed that proprietary information that was provided or examined during the inspection period was properly controlled or returned.

4OA7 Licensee-Identified Violations

The following violation of very low safety significance (Green) was identified by the licensee, and is a violation of NRC requirements which meets the criteria of the NRC Enforcement Policy for being dispositioned as an NCV.

- Technical Specification 3.3.2, "Engineered Safety Feature Actuation System (ESFAS) Instrumentation," required the ESFAS instrumentation for each function in Table 3.3.2-1 to be operable. Table 3.3.2-1, Function 4.e., "Steam Line Isolation," required two (2) channels per steam line and is applicable in Mode 1 and Modes 2 and 3, except when one main steam isolation valve is closed in each steam line. When one channel is inoperable, Condition D is entered which required placing the inoperable channel in trip within 72 hours. Contrary to the above between October 31, 2013, and November 6, 2013, "1C" steam generator steam flow transmitter (FT-495) was found to have a trip setpoint above the TS required value of 110.3 percent. Action was not taken to either restore the flow transmitter to operable status or place the channel in trip within 72 hours until operations staff was made aware of the issue on November 5, 2013. Subsequently, FT-495 was recalibrated to within the TS allowable value and placed back in service on November 6, 2013. This issue was entered in the licensee's CAP as CR 728740. The finding screened to Green, very low safety significance, in accordance with the NRC's SDP because it did not represent an actual loss of function of a single train for greater than its TS allowed outage time. Redundant instruments were available to actuate the main steam isolation function at the required setpoint. This violation is associated with Unit 1 LERs 05000348/2013-003-00 and -01.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee
B. Arens, Licensing Supervisor
H. Cooper, Engineering Programs Supervisor
D. Drawbaugh, EP Manager
D. Enfinger, Corrective Action Program Supervisor
C. Gayheart, Site Vice President
D. Hobson, Shift Operations Manager
J. Horn, Regulatory Affairs Manager
J. Hutto, Plant Manager
R. Martin, Engineering Director
D. Reed, Operations Support Manager
B. Reed, Nuclear Operations Training Supervisor
L. Riley, Performance Improvement
I. Sarygin, Sr. Engineer
D. Simmons, EP Specialist
B. Taylor, Nuclear Oversight Supervisor
C. Thornell, Operations Director
C. Westberry, Engineering Programs Supervisor

NRC personnel
Frank Ehrhardt, Chief, Branch 2, Division of Reactor Projects

LIST OF ITEMS OPENED AND CLOSED

Opened and Closed

05000364/2014002-01	NCV	Failure to Properly Conduct Cold Weather Contingency Procedures (Section 1R01)
05000348-364/2014002-03	NCV	Lack of Acceptance Criteria for Nuclear Instrument Channel Checks (Section 1R15)
05000364/2014002-04	NCV	Failure to Implement Fire Protection Program Requirements (Section 1R19)

Opened

05000348,364/20140-02	AV	Failure to Implement Preventive Maintenance on 4160V Breaker Mechanism Operated Cell Switches (Section 1R12)

Closed

05000348/2013-002-00 05000348/2013-002-01	LER	1B Emergency Diesel Generator in a Condition Prohibited by Technical Specifications due to an Unreliable Mechnanism Operated Cell Switch (Section 4OA3.2)
05000348/2013-003-00 05000348/2013-003-01	LER	1C Steam Generator Flow Transmitter Inoperable Longer Than Allowed By Technical Specifications (Section 4OA3.1)
05000348, 364/2515/182	TI	Review of the Industry Initiative to Control Degradation of Underground Piping and Tanks (Phase II) (Section 4A.5.3)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures:
FNP-0-AOP-21, Severe Weather, Ver. 37.0
FNP-0-SOP-0.12, Cold Weather Contingencies, Ver. 19.0
FNP-1-EMP-1383.01, Freeze Protection Inspections, Ver. 21.0
FNP-2-EMP-1383.01, Freeze Protection Inspections, Ver. 16.0

Condition Reports:
753589, 753648, 754055, 754132, 754183, 754347, 752957, 752718, 752662, 752957, 754183, 753098

Documents:
IRT activation checklist for CR#752957

Section 1R04: Equipment Alignment

Drawings:
D107084, PI&D for Jacket Coolant System for Diesel Generator 1B, Sheet 1, Ver. 18.0
D107086, PI&D for Air Start System for Diesel Generator 1B, Sheet 1, Ver. 21.0
D170800, PI&D for Lube Oil System for Diesel Generator 1B, Sheet 1, Ver. 16.0
D200209, PI&D for Lube Oil System for Diesel Generator 2B, Sheet 1, Ver. 11.0
D200211, PI&D for Jacket Coolant System for Diesel Generator 2B, Sheet 1, Ver. 23.0
D200212, PI&D for Air Start System for Diesel Generator 2B, Sheet 1, Ver. 23.0
D205003, Auxiliary Feedwater System, Sheet 1, Ver. 45.0
D205003, Auxiliary Feedwater System, Sheet 2, Ver. 34.0
D205007, Auxiliary Feedwater System, Sheet 1, Ver. 27.0
D205038L, Safety Injection System, Sheet 2, Ver 4.0

Procedures:
FNP-0-SOP-38.0, Diesel Generators, Version 123.0
FNP-0-SOP-38.0E, 2B Diesel Generator, Version 14.0
FNP-0-SOP-42.0, Diesel Generator Fuel Oil Storage and Transfer System, Version 54.3
FNP-0-SOP-42.0A, Diesel Generator and Fuel Oil Transfer and Storage, Version 3.0
FNP-1-SOP-37.1, 125 Volt DC Auxiliary Building Distribution System, Ver. 54.6
FNP-1-SOP-37.1A, 125 Volt DC Auxiliary Building Distribution System, Ver. 4.0
FNP-2-SOP-7.0, Residual Heat Removal System, Ver. 95.0
FNP-2-SOP-7.0A, Residual Heat Removal System, Ver. 9.0
SOP-22.0, Auxiliary Feedwater System, Ver. 73.2
SOP-22.0A, Auxiliary Feedwater System, Ver. 10.0

Section 1R05: Fire Protection Annual/Quarterly

Drawings:
A-508650, Fire Zone Data Sheet: Aux Bldg EL. 121'0", Sheet 20, Ver. 13
A-508651, Fire Zone Data Sheet: Diesel Generator Building (WEST) Sheet 05, Ver. 6.0
A-509018, Fire Zone Data Sheet: Aux Bldg EL. 100'-0", Sheet 10, Ver. 9
A-509018, Fire Zone Data Sheet: Legend, Sheet 02, Ver. 15
A-509018, Fire Zone Data Sheet: Notes, Sheet 03, Ver. 3

Procedures:
FNP-0-ACP-35.2, Flammable Material and Combustible Material Control, Ver. 14.3
FNP-0-SOP-0.4, Fire Protection Program Administration Procedure, Ver. 85.3

Section 1R07: Heat Sink Performance

Procedures
FNP-0-ETP-4385, Service Water Storage Pond Volume Survey Evaluation, Rev. 1
FNP-0-ETP-4388, Service Water Storage Pond Sounding Survey, Ver. 5
FNP-0-M-82, Service Water Plan, Ver. 12.0
FNP-0-SOP-61.0, Fire Protection – Pump House and Yard Main, Ver. 48.0
FNP-1-ETP-4395, Service Water Flow Balance Validation Test, Ver. 6
FNP-1-STP-24.1, Service Water Pump 1A 1B and 1C Inservice Test, Ver. 80.0
FNP-1-STP-24.2, Service Water Pump 1C 1D and 1E Inservice Test, Ver. 75.0
FNP-2-ETP-4395, Service Water Flow Balance Validation Test, Ver. 5
FNP-2-STP-24.1, Service Water Pump 2A 2B and 2C Inservice Test, Ver. 64.0
FNP-2-STP-24.2, Service Water Pump 2C 2D and 2E Inservice Test, Ver. 70.2
NMP-ES-012, Heat Exchanger Program, Version 7.0
NMP-ES-012-GL01, Heat Exchanger Program: Heat Exchanger Inspection, Testing and Condition Assessment, Version 2.0
NMP-ES-012-GL03, Heat Exchanger Program: Eddy Current Testing (ECT) Strategic Plan for Plant Farley, Ver. 1.0
NMP-ES-024-701, Eddy Current Testing of Heat Exchanger Tubing, Ver. 3.0

Calculations:
SM-C101142901-001, Farley Service Water System Flow Balancing Model
SM-SNC338705-002, SW-UHS Reference Summary

Drawings:
2386FAR, Farley Nuclear Plant Service Water Storage Pond Volume Survey, Rev. 0

Corrective Action Documents:
1063239901, Test the 1B Charging Pump Room Cooler per FNP-0-ETP-4447
481515, Service Water Pump 1A 1B and 1C Inservice Test
493949, SW Pump 2D, 2E and 2C Inservice Test

Other Documents:
1990-01-23, Letter from W.G. Hairston III to Regional Administrator, Region II: Response to Generic Letter 89-13, dated January 23, 1990
A-181001, Function System Description: Service Water System, Ver. 62.0
FNP-2-STP-24.1, 2A, 2B, and 2C Service Water Pump Quarterly Inservice Test Results, dated12/19/2013
Integrated Technologies, Inc. Inspection Report: Diesel Generator 2B Jacket Water Cooler, dated 6/25/2009
NDE Technology Inspection Summary: Farley Unit 1 Component Cooling Water – 1B, dated August 2013

Section 1R11: Licensed Operator Requalification Program

Documents:
Operations Training Simulator Exam Scenario, Scenario #23, Feb. 14, 2014

Procedures:
FNP-0-SOP-0.0, General Instructions to Operations Personnel, Ver. 153.1
FNP-0-TCP-17.3, Licensed Operator Continuing Training Program Administration, Ver. 36.0
FNP-0-TCP-17.6, Simulator Training Evaluation / Documentation, Ver. 30
FNP-2-UOP-2.4, Planned Reactor Shutdown and Cooldown to Cold Standby, Ver. 14.0
NMP-OS-007, Conduct of Operations, Ver. 9.2

Section 1R12: Maintenance Effectiveness

Condition Reports:
751064, 742443, 734903, 734517, 734508, 491530, 731880, 645821, 722793, 716179, 715623

Technical Evaluations:
717561, 744498, 726829, 741978, 677490, 677491

Documents:
CAR 208298
Lucius Pitkin, Inc. MOC Switch Visual Examination Report F13549-IR-001 dated 11/21/13
RHR 1B Pump exceeding criteria/consideration for (a)(1) status, Dec. 2, 2013

Procedures:
FNP-0-EMP-1313.12, Maintenance of Siemens-Allis 4.16kv Metal-Clad Switchgear MOC Switch, Version 7.0
NMP-ES-027-001, Maintenance Rule Implementation, Ver. 4.0

Work Orders:
SNC 421358, 525763

Section 1R13: Maintenance Risk Assessments and Emergent Work Evaluation
Procedures:
FNP-0-ACP-52.3, Mode 1,2,& 3 Risk Assessment, Ver. 9.0

Documents:
Equipment Outage Forecast, Mar. 15 through Mar. 21
NMP-GM-020-001-F01, Attachment 1, IRT Activation Checklist – CR 787536, Ver. 1.0
NMP-GM-020-001-F01, Attachment 4, IRT Closure Checklist – CR 787536, Ver. 1.1

Condition Reports:
787078, 787536, 788368

Section 1R15: Operability Determinations and Functionality Assessments
Condition Reports:
741302, 741048, 636049, 741001, 779624, 790183, 792374, 792227, 766010, 741001, 715623

Drawings:
D-175038, Unit 1, Safety Injection System P&ID, Ver. 42.0
D-175041, Unit 1, Residual Heat Removal System, P&ID, Ver. 18.0
D-177054, Unit 1, Elementary Diagram – Steam Generator Blowdown System Solenoid Valves, Ver. 4.0
D-177186, Unit 1, Elementary Diagram – Auxiliary Feedwater Pump 4160V No. 1B, Ver. 14.0
D-200013, Unit 2, P&ID – River Water, Service Water and Circulating Water System, Ver. 37.0
D-200049, Unit 2, P&ID – Chlorination Circulating Water System, Rev. 10
U-175971, Unit 1, Containment Pressure Protection III, Schematic Diagram, Ver. 1.0
U-210284, Butterfly Valve for 10BA74D, Ver. 4.0
U-210284, Unit 2, Butterfly Valve for 10BA74D, Ver. 1.0

Documents:
CARs 208749, 206879, 209867, 208249
Draft CSR922R22, Testing of Source Range and Intermediate Range Nuclear Instrumentation Channels at Farley Nuclear Units 1 & 2, May 18, 2011
Administrative Tracking Items (ATI) #960 and #1269
OPS-62102A/52102A/40302B/ESP52102A, Containment Structure and Isolation Lesson Plan, Ver. 1
A509008, Reactor Coolant System Flow Scaling Document, Rev. 2
ALA-13-131, Transmittal of CN-SEE-III-13-59, Revision 1, JM Farley Unit 1 RHR Pump 1B Surveillance test Evaluation, January 15, 2014, Rev. 1
OD# 13-04, Prompt Determination of Operability for CRs 741001, 742929, Rev. 1
OD# 13-04, Prompt Determination of Operability for CRs 741001, 742929, Rev. 2
CN-SEE-III-13-59, JM Farley Unit 1 RHR 1B Surveillance Test Evaluation, Rev. 0
WCAP-13751, Table 3-32 Reactor Trip System/Engineered Safety Features Actuation System Channel Uncertainty Allowances, Farley Units 1 & 2, Rev. 1
Legacy CR# 1-2000-148
CAR 209753, Ver. 1.0

Procedures:
FNP-0-M-50, Master List of Surveillance Requirements, Ver. 29.0
FNP-1-STP-1.0, Operations Daily and Shift Surveillance Requirements, Ver. 107.1
FNP-1-STP-10.0, ECCS Subsystem Flowpath Verification Test, Ver. 23.0
FNP-1-STP-220.3, Containment Pressure LOOP Calibration and Operational Test Q1E13PT0952, Ver. 29.0
FNP-2-STP-1.0, Operations Daily and Shift Surveillance Requirements, Ver. 96.0
FNP-2-STP-11.15B, RHR HX Discharge Valve Q2E11HCV603B
FNP-2-STP-41.2B, Intermediate Range N36 Channel Operational Test, Ver. 4.0
FNP-2-UOP-1.2, Startup of Unit from Hot Standby to Minimum Load, Ver. 98.0
NMP-AD-012, Operability Determinations and Functionality Assessments, Ver. 12.1
NMP-MA-014-001, Post Maintenance Testing Guideline, Ver. 3.0

Technical Evaluations:
655232, 741425, 792762, 766521, 780863

Work Orders:
SNC 537828, SNC 481666, 366195, 76291, 2082316401, 347235, 525763, 491107, 491106, 491108
Other:
Integrated Plant Computer (IPC) printout of nuclear instrumentation, January 14, 2014
Copy of email from Phil Mitchell to Chris Thornell, subject: U2 Rx startup control room team response to NI36, January 19, 2014
Main Control Logs
OBDN Equipment List printed on January 31, 2014

Section 1R18: Plant Modifications
Documents:
FMEA-FD-SNC88029-J001, Failure Modes and Effects Analysis
NMP-AD-008-F01, Applicability Determination, Version 7.1
NMP-ES-044-F02, DCP Checklist, Version 3.0
SNC88029A001, DCP A001 Worksheet
SNC88029J001, DCP Discipline 001 Worksheet
SNC88029J021, SOR Nuclear Qualification Test Report 9058-102

Section 1R19: Post Maintenance Testing
Condition Reports:
755419, 756274, 760135, 760108, 781354, 781114, 781106, 780695

Drawings:
D-175038, Unit 1 P&ID – Safety Injection System Sheets 1 and 2, Ver. 23.0
D-175041, Unit 1 P&ID – Residual Heat Removal System, Ver. 18.0
U-211024, Unit 2 Solid State Protection System Instruction Manual, Ver. 13.0

Procedures:
FNP-0-STP-80.1, Diesel Generator 1-2A Operability Test, Ver. 67.0
FNP-0-STP-80.2, Diesel Generator 1C Operability Test, Ver. 63.3

FNP-1-STP-11.2, 1B RHR Pump Comprehensive Inservice test & Preservice Test Appendix, Ver. 57.1
FNP-2-FSP-304, Smoke Detectors Supervisory Circuit Check, Ver. 6.1
FNP-2-STP-33.0B, Solid State Protection System Train B Operability Test, Ver. 53.1
FNP-2-STP-80.1, Diesel Generator 2B Operability Test, Ver. 53.0
NMP-ES-005, Scoping and Importance Determination for Equipment Reliability, Ver. 12.0
NMP-ES-006, Preventive Maintenance Implementation and Continuing Equipment Reliability Improvement, Ver. 8.1
NMP-ES-035-001, Fire Protection Program Implementation, Ver. 11.2
NMP-GM-020-001-F01, IRT Activation Checklist, January 18, 2014
NMP-GM-020-001-F02, Items for Consideration, January 18, 2014
NMP-GM-020-001-F03, Issue Response Plan, January 18, 2014
NMP-GM-020-001-F04, IRT Closure Checklist, January 18, 2014
NMP-GM-020-001-F06, IRT Report Out Guideline, Ver. 1.0

Technical Evaluations:
779252

Work Orders:
SNC544534, SNC546407, SNC546416, 540080, 556568, 493948

Documents:
Farley Nuclear Plant Event Notification Form – EN#49744, January 18, 2014
IST Program Component Basis Information – Unit 1, E11
Troubleshooting Plan for RHR Valve HCV-603B, March 1, 2014
U-184852, Diesel Generators 1B, 2B, and 1-2A Operations and Maintenance Manual, Ver. 41.0

Other:
CAR 209119, Apparent Cause Determination for Unit 1 and 2 pyro panels
Main Control Room Logs, February 27, 2014 to March 1, 2014

Section 1R20: Refueling and Other Outage Activities

Procedures:
FNP-2-STP-34.1, Containment Inspection (Post Maintenance), Ver. 34.0
FNP-2-STP-35.1, Unit Startup Technical Specification Verification, Ver. 40.1
FNP-2-UOP-1.1, Startup of Unit from Cold Shutdown to Hot Standby, Ver 95.0
FNP-2-UOP-1.2, Startup of Unit from Hot standby to Minimum Load, Ver. 98.0
NMP-GM-009, Plant Review Board Charter, Ver. 15.1

Condition Reports:
755641, 755280, 756940, 756495

Technical Evalautions:
757041, 755943

Drawings:
U-211024, Solid State Protection System Instruction Manual, Ver. 13.0
U-217465, SSPS Schematic Diagram Source Range Trip Logic, Ver. 3.0

Documents:
Restart PRB minutes, January 12, 2014
Restart PRB minutes, January 13, 2014

Section 1R22: Surveillance Testing
Condition Reports:
754683, 754785, 783086

Procedures:
FNP-0-AP-5.0, Surveillance Program Administrative Control, Rev. 33.0
FNP-0-SOP-0.0, General Instructions to Operations Personnel, Ver. 155.0
FNP-1-SOP-17.0 Appendix 4, Main Steam Line Isolation Valve Partial Stroke Using Local Observation, Ver. 64.0
FNP-2-STP-22.1, 2A Auxiliary Feedwater Pump Quarterly Inservice Test, Ver. 32.0
FNP-2-STP-22.16, Turbine Driven Auxiliary Feedwater Pump Quarterly Inservice Test, Ver. 65.4
NMP-DP-001, Operational Risk Awareness, Ver. 14.1
NMP-DP-001-GL01, Risk Assessment Worksheets, Ver. 9.3

Documents:
OPS-62104A/52104A/40201A/ESP-52104A, Main and Reheat Steam Lesson Plan, Ver. 2

Section 1EP6: Drill Evaluation
Documents:
Emergency Preparedness Crew 3 HAB Pre-Exercise, dated 2/19/14

Procedures:
FNP-0-AOP-49.0, Imminent Security Threat, Ver. 23.0
NMP-EP-110, Emergency Classification Determination and Initial Action, Version 6.1
NMP-EP-111, Emergency Notifications, Version 8.0

Section 4OA1: Performance Indicator Verification
Procedures:
FNP-0-AP-54, Preparation and Reporting of NRC Performance Indicator Data and NRC Operating Data, Ver. 14.0

Documents:
MSPI Derivation Report for Emergency AC System, Units 1 and 2, dated 1/31/2014
MSPI Derivation Report for Emergency AC System, Units 1 and 2, dated 2/11/2014
NEI 99-02, Regulatory Assessment Performance Indicator Guideline, Revision 7
Selected Unit 1 and Unit 2 Control Room Logs from December 2012 through December 2013

Section 4OA2: Problem Identification and Resolution
Documents:
Open Unit 1 Admin Tracking Items, dated February 28, 2014
Open Unit 2 Admin Tracking Items, dated February 28, 2014
Open Operator Burdens List, dated February 28, 2014
Open Operator Workarounds List, dated February 28, 2014

Procedures:
NMP-OS-006, Operations Performance Indicators, Version 14.0

Section 4OA3: Follow-up of Events and Notices of Enforcement Discretion
Condition Reports:
728740

Documents:
CAR 208532

Section 4OA5: Other Activities
Procedures:
FNP-0-ETP-4499.0, Dry Cask Loading Verification. 10.0
FNP-0-MP-110.0, Dry Fuel Storage Campaign Guidelines, Ver. 12.1
FNP-0-MP-110.8, Dry Fuel Storage Rigging Plan, Ver. 5.0
FNP-0-MP-111.1, Hi-Storm System Site Transportation, Ver. 13.0
FNP-0-MP-111.11, MPC Helium Leak Rate Testing, Ver. 3.0
FNP-0-MP-111.12, Forced Helium Dehydration System Operation, Ver. 7.0
FNP-0-MP-111.13, Supplemental Cooling System Operation, Ver. 5.0
FNP-0-MP-111.2, Hi-Storm System Preparation and Loading Operations, Ver. 15.0
FNP-0-MP-111.3, MPC Fuel Loading Operations, Ver. 22.0
FNP-0-MP-111.4, MPC Closure Operations, Ver. 18.0
FNP-0-MP-111.4, MPC Closure Operations, Ver. 19.0
FNP-0-MP-111.9, Cask Transporter Operation, Ver. 5.0
FNP-0-STP-630.0, MPC Integrity – Loading, Ver. 5.0
FNP-0-STP-630.2, Supplemental Cooling System Operability, Ver. 3.0
FNP-0-STP-820, Hi-Trac Transfer Cask Contamination Surveys, Ver. 4.0
FNP-0-STP-821, Hi-Trac Transfer Cask Average Surface Dose Rates, Ver. 6.0
FNP-0-STP-822, Hi-Storm Overpack Average Surface Dose Rates, Ver. 5.0
NMP-AD-008-F01, Applicability Determination, Ver. 8.1
NMP-AD-011-F01, 10 CFR 72.48 Screening/Evaluation, Ver. 8.0

Documents:
72-1014, HI-STROM 100 Certificate of Compliance (CoC), Amendment 3, May 29, 2007
HI-2002444, Holtec International Final Safety Analysis Report for the HI-STORM 100 Cask System, Rev. 5
PI-902601, Closure Welding of Multi-Purpose Canisters at Farley Station, Rev. 2
PI-CNSTR-EM-SC-112, CNSTR Weld: Power Supply and Weld Head, Gold Track V and PCI Canister Closure Weld Head – System Configuration, Rev. 5

Work Orders:
SNC531092,

Condition Reports:
773793, 777233, 782457, 780024, 780540, 780496, 778173

Corrective Action Documents:
CR535184
CR535186
CR617211
CR617218
CR617223
CR617251

Drawings:
D-170060BP, P&ID Diesel Generator Fuel Oil Sys Buried Piping, Rev 1
D-170070BP, P&ID Hydrogen And Oxygen Supply System Buried Piping, Rev 1
D-170119BP, P&ID - River Water, Service Water And Circulating Water System - Buried Piping, Rev 1
D-316102BP, P&ID Permanent Plant Roads General Layout Survey And Benchmark, Rev 1

Procedures:
FNP-0-GMP-81.0, General Excavating And Trenching Guidelines, Rev 16
NMP-ES-024-511, Ultrasonic Thickness Examination Procedure, Rev 4
NMP-ES-024-516, Ultrasonic Flow Acceleration Corrosion Examination Procedure, Rev 6
NMP-ES-036, Underground Pipe and Tanks Monitoring Program, Rev 10
NMP-ES-036-001, Underground Pipe and Tanks Monitoring Program Implementation, Rev 7

Other Documents:
2012 Plant Farley TI-182 Inspection Check-In Self-Assessment (Buried Piping Program), 8/31/2012
NEI 09-14, Guideline For The Management Of Underground Piping And Tank Integrity, Rev 3
Plant Farley Engineering Underground Pipes And Tanks Program Strategic Plan