



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II**

245 PEACHTREE CENTER AVENUE NE, SUITE 1200  
ATLANTA, GEORGIA 30303-1257

April 29, 2016

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

**SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT - NRC INTEGRATED  
INSPECTION REPORT 05000348/2016001 AND 05000364/2016001**

Dear Ms. Gayheart:

On March 31, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Joseph M. Farley Nuclear Plant, Units 1 and 2. On April 18, 2016, the NRC inspectors discussed the results of this inspection with you and other members of your staff. Inspectors documented the results of this inspection in the enclosed inspection report.

No NRC-identified or self-revealing findings were identified during this inspection. However, inspectors documented a licensee-identified violation which was determined to be of very low safety significance in this report. The NRC is treating this violation as a non-cited violation (NCV) consistent with Section 2.3.2.a of the Enforcement Policy. If you contest the violation or significance of the NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC resident inspector at Farley.

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/***

Shane Sandal, Chief  
Reactor Projects Branch 2  
Division of Reactor Projects

Docket Nos.: 50-348, 50-364

License Nos.: NPF-2, NPF-8

Enclosure: IR 05000348/2016001; 05000364/2016001  
w/Attachment: Supplementary  
Information

cc: Distribution via ListServ

C. Gayheart

2

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ADAMS: ☒ Yes      ACCESSION NUMBER: ML16120A122      ☒ SUNSI REVIEW COMPLETE      ☒ FORM 665 ATTACHED

OFFICE	RII:DRP	RII:DRP	RII:DRP			
SIGNATURE	Via Email/RA/KEM1	Via Email/RA/PKN	SRS5			
NAME	K. Miller	P. Niebaum	S. Sandal			
DATE	4/25/2016	4/27/2016	4/28/2016	5/ /2016	5/ /2016	5/ /2016
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

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C. Gayheart

3

Letter to Cheryl A. Gayheart from Shane Sandal dated April 29, 2016

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT - NRC INTEGRATED  
INSPECTION REPORT 05000348/2016001 AND 05000364/2016001

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**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION II**

Docket Nos.: 50-348, 50-364

License Nos.: NPF-2, NPF-8

Report Nos.: 05000348/2016001 and 05000364/2016001

Licensee: Southern Nuclear Operating Company, Inc.

Facility: Joseph M. Farley Nuclear Plant

Location: Columbia, Alabama

Dates: January 1, 2016 through March 31, 2016

Inspectors: P. Niebaum, Senior Resident Inspector  
K. Miller, Resident Inspector

Approved by: Shane Sandal, Chief  
Reactor Projects Branch 2  
Division of Reactor Projects

Enclosure

## **SUMMARY OF FINDINGS**

IR 05000348/2016001; and 05000364/2016001; January 1, 2016, through March 31, 2016; Joseph M. Farley Nuclear Plant, Units 1 and 2; Quarterly Integrated Inspection Report

The report covered a 3-month period of inspection by the resident inspectors. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy dated January 28, 2013, and revised February 4, 2015. The NRC's program for overseeing the safe operations of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 5. Documents reviewed which are not specifically identified in the Report Details are listed in the List of Documents Reviewed section of the Attachment.

A violation of very low safety significance that was identified by the licensee has been reviewed by the NRC. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. The violation and corrective action tracking number are listed in Section 4OA7 of this report.

## REPORT DETAILS

### Summary of Plant Status

Unit 1 started the report period at approximately 100 percent rated thermal power (RTP). On March 31, a Unit 1 load reduction occurred because the main turbine governor valve #1 closed unexpectedly. Following the event, Unit 1 stabilized at approximately 91 percent RTP. Unit 1 remained at approximately 91 percent through the end of the report period.

Unit 2 operated at approximately 100 percent RTP throughout the report period.

#### 1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

##### 1R01 Adverse Weather Protection (71111.01)

###### a. Inspection Scope

Seasonal Extreme Weather Conditions: The inspectors reviewed the licensee's preparations to protect risk-significant systems from near freezing ambient temperatures. The inspectors verified that weather-related equipment deficiencies identified during the previous year had been placed into the work control process and/or corrected before the onset of seasonal extremes. The inspectors evaluated the licensee's implementation of cold weather preparation procedures and compensatory measures before the onset of and during seasonal extreme weather conditions. The inspectors evaluated the following risk-significant systems:

- Unit 1 Auxiliary Feedwater System/Condensate Storage Tank
- Unit 2 Auxiliary Feedwater System/Condensate Storage Tank

###### b. Findings

No findings were identified.

##### 1R04 Equipment Alignment (71111.04)

###### a. Inspection Scope

Partial Walkdown: The inspectors verified that critical portions of the following two systems or trains 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.

- Units 1 & 2, Common Main Control Room AC and Emergency Filtration System – "A" Train
- Unit 2, 2B diesel generator (DG) while the 1-2A DG was out of service for maintenance

Complete Walkdown: The inspectors verified the alignment of the Unit 1 125 Volt D.C. Auxiliary Building Distribution 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. The inspectors reviewed records related to the system outstanding design issues, maintenance work requests, and deficiencies. The inspectors verified that the selected system was correctly aligned by performing a complete walkdown of accessible components.

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

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 attributes:

- 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.

- Unit 1, Room 318 - Cable Spreading Room, Fire Area 1-040, Fire Zone 0318
- Unit 1, Room 346 - Switchgear and M-G Set Room, Fire Area 1-041, Fire Zone 0346
- Unit 2, Room 2318 - Cable Spreading Room, Fire Area 2-040, Fire Zone 2318
- Unit 2, Room 2335 – Load Center Room, Train A, Fire Area 2-041, Fire Zone 2335
- Unit 2, Room 2343 – Load Center Room, Train A, Fire Area 2-041, Fire Zone 2343
- Unit 2, Room 2346 - Switchgear and M-G Set Room, Fire Area 2-041, Fire Zone 2346

Annual Inspection: The inspectors evaluated the licensee's fire brigade performance during a drill on February 23, 2016, and assessed the brigade's capability to meet fire protection licensing basis requirements. The inspectors observed the following aspects of fire brigade performance:



- capability of fire brigade members
- leadership ability of the brigade leader
- use of turnout gear and fire-fighting equipment
- team effectiveness
- compliance with site procedures

The inspectors also assessed the ability of control room operators to combat potential fires, including identifying the location of the fire, dispatching the fire brigade, and sounding alarms. The inspectors evaluated the licensee's ability to declare the appropriate emergency action level and make required notifications in accordance with NUREG 0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants (FEMA-REP-1)," and Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities."

b. Findings

No findings were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

Internal Flooding: The inspectors reviewed related flood analysis documents and walked down the area(s) listed below containing risk-significant structures, systems, and components susceptible to flooding. The inspectors verified that plant design features and plant procedures for flood mitigation were consistent with design requirements and internal flooding analysis assumptions. The inspectors also assessed the condition of flood protection barriers and drain systems. In addition, the inspectors verified the licensee was identifying and properly addressing issues using the corrective action program.

- Unit 2, Auxiliary Building 100' elevation, lower equipment room

Underground Cables: The inspectors reviewed related flood analysis documents and inspected the areas listed below containing cables whose failure could disable risk-significant equipment. The inspector directly observed the condition of cables and cable support structures and, as applicable, verified that dewatering devices and drainage systems were functioning properly. In addition, the inspectors verified the licensee was identifying and properly addressing issues using the corrective action program.

- Unit 1, Pull Box 1ZB1M43
- Unit 1, Pull Box 1ZB1M44
- Unit 2, Pull Box 1ZB2M43
- Unit 2, Pull Box 1ZB2M44

b. Findings

No findings were identified.

1R07 Heat Sink Performance (71111.07)

a. Inspection Scope

Annual Review: The inspectors verified the readiness and availability of the 2B diesel generator jacket water heat exchanger to perform its design function by reviewing eddy current testing and the licensee's heat exchanger inspection reports. Additionally, the inspectors verified that the licensee entered any significant heat exchanger performance problems into the corrective action program and that the licensee's corrective actions were appropriate.

b. Findings

No findings were identified.

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

a. Inspection Scope

Resident Inspector Quarterly Review of Licensed Operator Regualification: The inspectors observed a simulator scenario conducted for training of an operating crew for regualification on January 12, 2016. The inspectors assessed the following attributes:

- 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

Resident Inspector Quarterly Review of Licensed Operator Performance: The inspectors observed licensed operator performance in the main control room during a high risk activity on March 31, 2016. The inspectors observed the control room staff's recovery actions from the Unit 1 main turbine governor valve failing closed while the plant was operating at 100% power. 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

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 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 and the maintenance rule coordinator to assess the accuracy of performance deficiencies and extent of condition.

- Unit 2, turbine driven auxiliary feedwater pump, overfill of turbine bearing reservoir
- Unit 2, 2C atmospheric relief valve (ARV) failure to stroke during surveillance test

b. Findings

No findings were identified.

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

a. Inspection Scope

The inspectors reviewed the five maintenance activities listed below to verify that 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.

- Unit 2, January 7, 2016, 2B RHR equipment outage, TDAFW pump discharge flow control valve surveillance
- Unit 1, February 2, 2016, 1B DG equipment outage, 1B RHR flow control valve (605B), RHR HX bypass valve maintenance
- Unit 1, February 22, 2016, 1B DG surveillance, main generator hydrogen temperature control valve bypass operation
- Units 1 and 2, March 16, 2016, High Voltage Switchyard Work including maintenance on PCB 830 and 836 and testing on the #1 auto bank transformer
- Unit 1, March 24, 2016, SR 3.0.3 risk evaluation for missed technical specification surveillance, SR 3.4.8.2 on the "1B" 125 volt DC battery

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.

- Unit 1, Power Range NI-41 low output current indications, CR 10135727
- Unit 2, 2C charging pump circuit breaker spring charging motor LS2 switch loose, CR 10167409
- Unit 2, Flexible conduit between 120 vital AC panel and main control board disconnected, CR 10169414
- Units 1 & 2, 1-2A diesel generator jacket water heat exchanger anode plug leakage, CR 10171511
- Unit 2, 2A service water pump discharge vacuum breaker piping leak, CR 10175510
- Unit 1, 1B diesel generator degraded exhaust system, CR 10176773
- Units 1 & 2, Common main control room ventilation duct leakage, "B" train, CR 10089307

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.

- WO SNC749633, Unit 2, 2C charging pump circuit breaker spring charging motor LS2 switch loose
- WO SNC701453, Perform 24-month inspection FNP-0-MP-14.1 and FNP-0-MP-12.2 on 2B diesel generator
- WO SNC759465, Low Oil Level in the Unit 2 TDAFW Pump
- WO SNC69675, Replace 2B Service Water Pump
- WO SNC695155, Perform functional test per FNP-1-STP-213.12B on steam generator pressure instrument channels
- Various work orders, Unit 1 rod control urgent failure alarm

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.

b. Findings

No findings were identified. A licensee-identified violation is documented in Section 4OA7.

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.

Routine Surveillance Tests

- FNP-2-STP-73.1, Hot Shutdown Panel Operability Verification, Appendix P, Verification of TDAFWP Flow Control Valve Operation From the Hot Shutdown Panel, Ver. 22.0
- FNP-1-STP-22.16, Turbine Driven Auxiliary Feedwater Pump Quarterly Inservice Test, Ver. 63.0
- FNP-0-ETP-4493, Control Room Habitability Tracer Gas Testing, Ver. 6.0
- FNP-2-STP-22.2, 2B Auxiliary Feedwater Pump Quarterly Inservice Test, Ver. 31
- FNP-0-STP-80.1, Diesel Generator 1-2A Operability Test, Ver. 68.1

In-Service Tests (IST)

- FNP-1-STP-23.1, 1A Component Cooling Water Pump Quarterly Inservice Test, Ver. 38.3

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 January 27, 2016, and the emergency exercise conducted on March 9, 2016. 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.

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 2015 and December 2015 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 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.

Cornerstone: Initiating Events

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

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 Annual Follow-up of Selected Issues

a. Inspection Scope

The inspectors conducted a detailed review of the following two condition reports which constitute one inspection sample:

- CR 10193448, 1-2A DG Unbalanced Engine Condition at Full Load
- CR 10196233, 1-2A DG Firing Pressure Imbalance

The inspectors evaluated the following attributes of the licensee's actions:

- complete and accurate identification of the problem in a timely manner
- evaluation and disposition of operability and reportability issues
- consideration of extent of condition, generic implications, common cause, and previous occurrences
- classification and prioritization of the problem
- identification of root and contributing causes of the problem
- identification of any additional condition reports
- completion of corrective actions in a timely manner

b. Findings

No findings were identified.

4OA5 Other Activities

Institute of Nuclear Power Operations Report Review: The inspectors reviewed the most recent INPO evaluation report dated January 2016 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.

4OA6 Meetings, Including Exit

On April 18, 2016, the resident inspectors presented the inspection results to Ms. Cheryl Gayheart and other members of the licensee's staff. The inspectors confirmed that proprietary information was not provided or examined during the inspection period.

4OA7 Licensee-Identified Violations

The following violation of very low safety significance (Green) was identified by the licensee and was a violation of NRC requirements which met the criteria of the NRC Enforcement Policy, for being dispositioned as a non-cited violation.

- Technical Specifications 5.4, "Procedures," required, in part, that written procedures shall be established, implemented and maintained covering activities recommended in Regulatory Guide (RG) 1.33, Revision 2, Appendix A. Section 9.a of RG 1.33 recommended that maintenance that can affect the performance of safety-related equipment should be properly pre-planned and performed in accordance with written procedures, instructions, or drawings appropriate to the circumstances. Contrary to the above, the licensee failed to provide procedures that were appropriate to the circumstances for adding the proper amount of oil for the turbine connected to the Unit 2 turbine driven auxiliary feed water (TDAFW) pump. On February 4, 2016, the turbine oil system was overfilled because licensee procedure FNP-0-SOP-22.1, "Auxiliary Feedwater Pump Lubrication Procedures," (Ver. 7) and work order SNC 759097 did not contain guidance to identify the proper oil level. The finding was determined to be of very low safety significance (Green) because there was not an actual loss of function for greater than the TS allowed outage time of 72 hours. The licensee entered this issue into the corrective action program as CR 10178550.

## **SUPPLEMENTARY INFORMATION**

### **KEY POINTS OF CONTACT**

#### **Licensee Personnel:**

J. Andrews, Maintenance Director  
G. Bell, Licensing Supervisor  
E. Berry, Site Systems Manager  
J. Carroll, Shift Operations Manager  
B. Freeman, Engineering Supervisor  
C. Gayheart, Site Vice President  
D. Hall, EP Supervisor  
S. Henry, Operations Director  
R. Hruby, Engineering Director  
J. Hutto, Plant Manager  
V. Locke, Performance Improvement Supervisor  
L. Shaffield, Assistant Maintenance Director  
B. Taylor, Regulatory Affairs Manager

### **LIST OF DOCUMENTS REVIEWED**

#### **Section 1R01: Adverse Weather Protection**

##### **Procedures:**

FNP-0-SOP-0.12, Cold Weather Contingencies, Ver. 22  
NMP-GM-025, Seasonal Readiness Process, Ver. 3.3  
FNP-1-EMP-1383.01, Freeze Protection Inspections, Ver. 21

##### **Drawings:**

D-173498, Single Line, Cable & Conn. Diagram 120/280 VAC Dist. Cab 1CC, Rev. 10  
B-172374, Freeze Protection – Service Water & Misc. Cold Piping, Sheet 6, Rev. 6  
B-172374, Freeze Protection – Service Water & Misc. Cold Piping, Sheet 7, Rev. 3  
B-172374, Freeze Protection – Service Water & Misc. Cold Piping, Sheet 25, Rev. 2

##### **Documents:**

Freeze Protection Deficiencies List per FNP-0-SOP-0.12, dated January 3, 2016.  
Work Order: SNC650744, SNC69159  
CRs 10129296, 10129305, and 10129320

#### **Section 1R04: Equipment Alignment**

##### **Drawings:**

D-175012, HVAC & Filter P&ID, Control Room and Computer Room, Ver. 40  
D-205012, HVAC & Filter P&ID, Control Room and Computer Room, Ver. 41  
D-175046, HVAC and Filt. Process Flow Diag. Control Rm. & Computer Rm., Ver. 19.0  
D-200209, P&ID, Lube Oil System for 2B DG, Ver. 12  
D-200212, P&ID, Air Start System for 2B DG, Ver. 23  
D-200213, P&ID, Fuel Oil System for 2B DG, Ver. 12



D-177082, Unit 1 – Single Line – DC Distribution System 1A, Ver. 43.0  
 D-177083, Unit 1 – Single Line – DC Distribution System 1B, Ver. 38.0  
 C-177133, Unit 1 – Interlock Schematic – Battery Charger 1C, Rev. 5

Procedures:

FPN-0-SOP-56.0, Control Room HVAC System, Ver. 56  
 FNP-0-SOP-56.0A, Control Room HVAC System, Ver. 17  
 FNP-0-SOP-38.0E, 2B Diesel Generator, Ver. 15  
 FNP-1-SOP-37.1, Unit 1 125 Volt D.C. Auxiliary Building Distribution System, Ver. 56.0  
 FNP-1-SOP-37.1A, Unit 1 Auxiliary Building 125 Volt DC Distribution System, Ver. 5.0  
 FNP-1-STP-905.0, Auxiliary Building Battery Inspection, Ver. 13.0

CRs 10181734, 0011440, 10023232, 10053820, 10080098, 10089516, 10112914, 10166211, 10147384, 10094951, 10130256, 10186424, 10151797, 10161606, 10200009

**Section 1R05: Fire Protection Annual/Quarterly**

Drawings:

D513641, Unit No. 1 Fire Barriers and Fire Boundaries – U1 Auxiliary Building and Containment  
 El. 130' and 139', Ver. 1.0  
 D356848, Unit No. 2 Fire Barriers and Fire Boundaries – U2 Auxiliary Building and Containment  
 El. 130' and 139', Ver. 1.0

Documents:

A-181805, NFPA 805 Fire Protection Program Design Basis Document, Ver. 1.0

Procedures:

FPN-1-FPP-1.0, Unit 1 Auxiliary Building Pre-Fire Plan, Ver. 1.0  
 FNP-2-FPP-1.0, Unit 2 Auxiliary Building Pre-Fire Plan, Ver. 1.0  
 FNP-0-FPP-1.0, Standard Fire Response Operating Guidelines, Ver. 4.0  
 NMP-TR-425, Fire Drill Program, Ver. 7.3  
 FNP-0-AOP-29.0, Plant Fire, Ver. 47  
 NMP-EP-110, Emergency Classification Determination and Initial Action, Ver. 8.1  
 FNP-0-EIP-13.0, Fire Emergencies, Ver. 30

Condition Reports:

10182337, 10182340, 10182345, 10182350, 10182352, 10182355, 10187452, 10187965

**Section 1R06: Flood Protection Measures**

Documents:

WOs SNC360100, 643700, 747731  
 SNC641277, Equivalency Determination to replace watertight door gasket  
 RER 1040457101, Watertight Doors, CCW Heat Exchanger Area  
 CRs 10184801, 10067727

Procedures:

NMP-ES-051-004, Pull Box Inspection Procedure, Ver. 3.4

Drawings:

D-172100, Unit 1 Outdoor Electrical Duct Runs – General Arrangement, Ver. 9.0  
 C-172450, Unit 1 Plan and Development of Pull Box B1M43, Rev. 0  
 C-172451, Unit 1 Plan and Development of Pull Box B1M44, Rev. 0  
 C-202450, Unit 2 Plan and Development of Pull Box B2M43, Rev. 0  
 C-202451, Unit 2 Plan and Development of Pull Box B2M44, Rev. 0

**Section 1R07: Heat Sink Performance**Procedures:

NMP-ES-012, Heat Exchanger Program, Ver. 10  
 NMP-ES-012-GL01, Heat Exchanger Program Heat Exchanger Inspection, Testing and Condition Assessment, Ver. 4  
 NMP-ES-012-GL03, Heat Exchanger Program Eddy Current Testing (ECT) Strategic Plan for Farley, Ver. 1.0  
 NMP-ES-024-701, Eddy Current Testing of Heat Exchanger Tubing, Ver. 3.1

Documents:

NDE Technology Inspection Summary Report for Farley Unit 2, 2B Diesel Generator (DG) Jacket Water Cooler, January 2016  
 IQ Review Maintenance Review Strategy for the 2B DG jacket water heat exchanger, approved April 8, 2014  
 CR 10175018  
 Work Order SNC696581  
 SM-C081865601-001, Plant Farley HX Tube Plugging Criteria, Ver. 6  
 SM-97-1505-001, Ver. 5.0

**Section 1R11: Licensed Operator Regualification Program**Documents:

OPS-56400A, LOCT 14-16 Segment 16-1, 16-S0102 Simulator Exercise Guide, Rev. 0

Procedures:

NMP-TR-416, Licensed Operator Continuing Training Program Administration, Ver. 6  
 NMP-TR-214, Systematic Approach to Training Development Phase, Ver. 8  
 NMP-OS-007, Conduct of Operations, Ver. 11  
 NMP-OS-007-001, Conduct of Operations Standards and Expectations, Ver. 14.3  
 FNP-0-SOP-0.0, General Instructions to Operations Personnel, Ver. 161  
 NMP-EP-110-GL01, FNP EALs – ICs, Threshold Values and Basis, Ver. 9.0

**Section 1R12: Maintenance Effectiveness**

CARs 261303, 262993  
 F-16-010, Issue Response Team (IRT) documents for U2 TDAFW oil leak  
 TEs 947608, 949076  
 Work Order SNC702656  
 CRs 10146028, 10176833, 10178550, 10191811

Procedures:

FNP-2-STP-45.15, MS ARV and Emergency Air Compressor Cold Shutdown Test, Ver. 9.0  
 FNP-0-SOP-22.1, Auxiliary Feedwater Pump Lubrication Procedures, Ver. 7.0

**Section 1R13: Maintenance Risk Assessments and Emergent Work Evaluation**Procedures:

NMP-GM-031, On-Line Configuration Risk Management Program, Ver. 3.0  
 NMP-GM-031-001, Online Maintenance Rule (a)(4) Risk Calculations, Ver. 3.0  
 NMP-DP-001, Operational Risk Awareness, Ver. 14.2  
 NMP-OS-010, Protected Train/Division and Protected Equipment Program, Ver. 7.2  
 FNP-1-SOP-28.1, Turbine Generator Operation, Ver. 128.2  
 NMP-GM-021-001, Plant Farley Switchyard Access and Maintenance Controls, Ver. 2  
 NMP-GM-021, Switchyard Access and Maintenance Controls, Ver. 5

Documents:

Unit 2, EOOS Operator's Risk Report, January 7, 2016  
 Unit 1, EOOS Operator's Risk Report, February 2, 2016  
 Unit 1, Integrated CDF Risk Report, February 2, 2016  
 Unit 1, EOOS Operator's Risk Report, February 22, 2016  
 Unit 1, EOOS Operator's Risk Report, March 16, 2016  
 Unit 2, EOOS Operator's Risk Report, March 16, 2016  
 Unit 1, EOOS Operator's Risk Report, March 24, 2016  
 CR 10202065

**Section 1R15: Operability Determinations and Functionality Assessments**Drawings:

D-200013, Unit 2 P&ID – River Water, Service Water and Circulating Water Systems, Sheet 2, Ver. 22.0  
 U184852, Unit 1 & 2, Diesel Engine Generators 1-2A, 1B, and 2B Operation and Maintenance Manual, Volumes I, II, & III, Ver. 48.0  
 D-175046, HVAC and Filt. Process Flow Diag. Control Rm. & Computer Rm., Ver. 19.0

Documents:

1-16-01, Prompt Determination of Operability (PDO) for CR 10163535  
 Immediate Determination of Operability (IDO) for CR 10167409  
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 Immediate Determination of Operability (IDO) for CR 10175510  
 Immediate Determination of Operability (IDO) for CR 10176773  
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 Regulatory Guide (RG) 1.147, Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1, Rev. 17  
 ASME Nuclear Code Case N-513-3, Evaluation Criteria for Temporary Acceptance of Flaws in Moderate Energy Class 32 or 3 Piping, Section XI, Division 1, January 26, 2009  
 SM-03-0018-004, Offsite and Control Room LOCA Doses, Ver. 1

CRs 10163535, 10167409, 10169414, 10175510, 10178060, 10179715, 10176773, 10180424, 10184314, 10187331, 10189895

Procedures:

FN-P-1-STP-1.0 Operations Daily and Shift Surveillance Requirements, Ver. 116.1

FN-P-1-STP-109.0, Power Range Neutron Flux Channel Calibration, Ver. 61

FN-P-1-STP-109.1, Power Range Neutron Flux Channel Calibration using the Plant Computer, Ver. 47

FN-P-2-STP-73.1, Hot Shutdown Panel Operability Verification, Appendix H, Verification of A Train Charging Pump Operation From The Hot Shutdown Panel, Ver. 22.0

NMP-ES-077, Processing ASME Class 2 and 3 Pressure Boundary Integrity Challenges, Ver. 4.0

FN-P-0-M-111.0, Control Room integrity Program, Ver. 3.1

**Section 1R19: Post Maintenance Testing**

Procedures:

FN-P-2-STP-73.1, Hot Shutdown Panel Operability Verification, Appendix H, Verification of A Train Charging Pump Operation From The Hot Shutdown Panel, Ver. 22.0

FN-P-0-MP-14.1, Emergency Diesel Generators 1-2A, 1B, and 2B (24 Month) Inspections, Ver. 60.0

FN-P-0-MP-12.2, Emergency Diesel Generator Air Intake and Exhaust Silencer Inspection, Ver. 12.0

FN-P-2-STP-80.1, DG 2B Operability Test, Ver. 54.1

FN-P-0-SOP-22.1, Auxiliary Feedwater Pump Lubrication Procedures, Ver. 7.0

FN-P-2-STP-24.1, 2A, 2B and 2C Service Water Pump Quarterly Inservice Test, Ver. 67.0

FN-P-1-STP-213.12B, Steam Generator 1A Q1N11PT0476, Steam Generator 1B Q1N11PT0486, and Steam Generator 1C Q1N11PT0496 Operational Test, Ver. 44.2

FN-P-1-SOP-41.0, Control Rod Drive and Position Indication System, Ver. 38

FN-P-1-STP-5.0, Full Length Control Rod Operability Test, Ver. 31

NMP-MA-014-001, Post Maintenance Testing Guidance, Ver. 4.1

Documents:

Human Performance Review Board Summary for CR10178550, Feb. 11, 2016

Main Control Room logs

ASME OM Code-2001, Code for Operation and Maintenance of Nuclear Power Plants

CRs 10167409, 10172744, 10172615, 10172633, 10172687, 10175412, 10185922, 10178794, 10178701, 10178612, 10178550, 10178526, 10178160, 10182644, 10186862, 10185922, 10189350, 10190170, 10192519, 10197433

Work Orders: SNC749633, SNC686292, SNC701453, SNC759483, SNC759097, SNC759465, SNC69675, SNC695155, SNC768655, SNC771131, SNC775401, SNC775626, SNC771879

**Section 1R22: Surveillance Testing**

Procedures:

FN-P-2-STP-73.1, Hot Shutdown Panel Operability Verification, Appendix P, Verification of TDAFWP Flow Control Valve Operation from the Hot Shutdown Panel, Ver. 22.0

FN-P-0-STP-80.1, Diesel Generator 1-2A Operability Test, Ver. 68.1

FN-P-0-SOP-38.0, Diesel Generators, Ver. 124.2

FNP-1-STP-22.16, Turbine Driven Auxiliary Feedwater Pump Quarterly Inservice Test, Ver. 63.0

FNP-1-STP-22.20, TDAFW Pump Steam Admission Valves Air Accumulator Test, Ver. 14.0

FNP-0-SOP-0.0, General Instructions to Operations Personnel, Ver. 161

FNP-1-STP-23.1, 1A Component Cooling Water Pump Quarterly Inservice Test, Ver. 38.3

FNP-2-STP-22.2, 2B Auxiliary Feedwater Pump Quarterly Inservice Test, Ver. 31

FNP-0-ETP-4493, Control Room Habitability Tracer Gas Testing, Ver. 6

#### Documents:

FNP-0-M-111, Control Room Integrity Program, Ver. 3.1

Regulatory Guide 1.197, May 2003

FNP-0-STP-26.0A, performed on July 6, 2015

FNP-0-STP-26.0B, performed on January 3, 2016

OPS-62107C, Control Room Ventilation Lesson Plan, October 26, 2012

Work Order: SNC91397

Nucon International Inc. Test Report, Control Room Habitability Tracer Gas Leak Testing at Farley Nuclear Plant, Feb. 2016

NL-03-1620, Response to Generic Letter 2003-01, Control Room Habitability, August 4, 2003

NL-04-1474, Response to Generic Letter 2003-01, Control Room Habitability, August 25, 2004

CRs 10173793, 10089307

#### Drawings:

D-175046, Ver. 19

D-175012, Ver. 40

D-205012, Ver. 41

D-175002, Sheet 1, Ver. 49.0

D-175002, Sheet 2, Ver. 28.0

D-175002, Sheet 3, Ver. 14.0

D-205007, Sheet 1, Ver. 29.0

D-175012, Sheet 1, Ver. 40.0

#### **Section 1EP6: Drill/Training Evaluation**

Emergency Preparedness Crew 4 Exercise Controller/Evaluator Package, January 27, 2016

Emergency Preparedness Drill Report for 1/27/2106 Practice Exercise, Feb. 1, 2016

Plant Farley Emergency Notification Form, Messages 1 thru 6, January 27, 2016

Plant Farley Emergency Notification Form, Messages 1 thru 6, March 9, 2016

CRs 10174350, 10174351

#### Procedures:

NMP-EP-112-GL01, Farley Site Specific PAR Development Tools, Ver. 1.0

NMP-EP-110-GL01, FNP EALs – ICS, Threshold Values and Basis, Ver. 9.0

NMP-EP-110, Emergency Classification Determination and Initial Action, Ver. 8.1

NMP-EP-104, Dose Assessment, Ver. 8

NMP-EP-112, Protective Action Recommendations, Ver. 5.0

NMP-EP-112, Protective Action Recommendations, Ver. 5.1

FNP-1-EEP-0, Reactor Trip or Safety Injection, Ver. 47

FNP-1-EEP-1, Loss of Reactor Coolant or Secondary Coolant, Ver. 31

FNP-0-AOP-29.0, Plant Fire, Ver. 46  
 FNP-0-EIP-13.0, Fire emergencies, Ver. 30  
 NMP-EP-402, Plant Farley Emergency Management Guideline, Ver. 12.1  
 FNP-1-FRP-H.1, Response to Loss of Secondary Heat Sink, Rev. 27  
 FNP-1-AOP-17.1, Rapid Turbine Power Reduction, Rev. 7  
 FNP-1-AOP-100, Instrument Malfunction, Ver. 17  
 FNP-1-ARP-1.12, Annunciator Response Center for MCB Annunciator Panel M, Ver. 63.2  
 FNP-1-FRP-S.1, Response to Nuclear Power Generation/ATWT, Rev. 28  
 NMP-EP-110-001, Farley Specific PAR Instruction, Ver. 1

#### **Section 40A1: Performance Indicator Verification**

##### Procedures:

FNP-0-AP-54, Preparation and Reporting of NRC Performance Indicator Data and NRC  
 Operating Data, Ver. 15.0  
 FNP-0-ACP-16.1, Reactor Trip/Transient Analysis, Ver. 8.1

##### Documents:

Selected Unit 1 and Unit 2 Control Room Logs from January 2015 through December 2015  
 Unit 1 and 2 Consolidated Data Entry Monthly Operating Reports for January 2015 through  
 December 2015  
 NEI 99-02, Regulatory Assessment Performance Indicator Guideline, Revision 7

#### **Section 40A2: Problem Identification and Resolution**

##### Procedures:

NMP-AD-002, Problem Solving and Troubleshooting Guidelines, Ver. 12.0

##### Documents:

NMP-AD-002, Attachment 2, CR 10193448, 10196233, Complex Troubleshooting Data Sheet  
 CRs 10180270, 10193448, 10193505, 10193506, 10194061, 10194085, 10194092, 10196233,  
 10193505, 10193506