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

August 17, 2011

Mr. L. Mike Stinson
Vice President - Farley
Southern Nuclear Operating Company, Inc.
Farley Nuclear Plant
P.O. Drawer 470
BIN B500
Ashford, AL 36312

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT - NRC TRIENNIAL FIRE PROTECTION INSPECTION REPORT 05000348/2011009 AND 05000364/2011009

Dear Mr. Stinson:

On March 25, 2011, the U.S. Nuclear Regulatory Commission (NRC) completed a triennial fire protection inspection at your Joseph M. Farley Nuclear Plant Units 1 and 2. The preliminary inspection results were discussed on that date, with you and other members of your staff. As a result of post-inspection analysis of the preliminary inspection findings by the NRC in conjunction with additional information provided by your staff, the nature of the results changed from that discussed on March 25, 2011, and these changes were discussed by telephone with Mr. R. Martin, Engineering Programs Manager, and others on April 29, 2011. On July 22, 2011, a final exit meeting was conducted to discuss the results of the inspection with you, and other members of your staff.

During this inspection, the NRC staff examined activities conducted under your license as they relate to public health and safety and compliance with the Commission's rules and regulations. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, and interviews with licensee personnel.

Based on the results of this inspection, no findings were identified.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, if any, will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of

NRC's document 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/

Rebecca L. Nease, Chief
Engineering Branch 2
Division of Reactor Safety

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

Enclosure: Inspection Report 0500348/2011009 and 05000364/2011009
w/Attachment: Supplemental Information

cc w/encl: (See page 3)

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ADAMS: X☐ Yes ACCESSION NUMBER:___ML112310661_____ X☐ SUNSI REVIEW COMPLETE ☐ FORM 665 ATTACHED

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DATE	7/26/2011	8/ 5 /2011	8/ /2011	7/25/2011	8/ 10 /2011	8/ 8 /2011	
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Letter to L. Mike Stinson from Rebecca L. Nease dated August 17, 2011.

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT - NRC TRIENNIAL FIRE PROTECTION INSPECTION REPORT 05000348/2011009 AND 05000364/2011009

Distribution w/encl:
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T. Lighty, RII DRP Br2 PE

U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.:	50-348, 50-364
License No.:	NPF-2, NPF-8
Report No.:	05000348/2011009 AND 05000364/2011009
Licensee:	Southern Nuclear Operating Company, Inc. (SNC)
Facility:	Joseph M. Farley Nuclear Plant
Location:	Columbia, Alabama 36319
Dates:	March 07 – 11, 2011 (Week 1) March 21 – 25, 2011 (Week 2)
Inspectors:	Necota Staples, Senior Project Inspector (Lead Inspector) Pauline Braxton, Reactor Inspector Mina Sheikh, Senior Project Inspector Gerald Wiseman, Senior Reactor Inspector
Approved by:	Rebecca L. Nease, Chief Engineering Branch 2 Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000348/2011-009, 05000364/2011-009; 03/07 - 11/2011 and 03/21 - 25/2011;
Joseph M. Farley Nuclear Plant, Units 1 & 2; Triennial Fire Protection Inspection.

This report covers an announced two-week period of inspection by a team of four regional inspectors. No findings of significance were identified. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R05 Fire Protection

This report presents the results of a triennial fire protection inspection (TFPI) for a plant in transition to National Fire Protection Association (NFPA) Standard 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants, 2001 Edition." This inspection was conducted in accordance with NRC Inspection Procedure (IP) 71111.05TTP, "Fire Protection-NFPA 805 Transition Period (Triennial)." The objective of the inspection was to review a minimum sample of 3 risk-significant fire areas (FAs) to verify implementation of the Farley Nuclear Plant (FNP) fire protection program (FPP) and to verify site specific implementation of at least one B.5.b mitigating strategy as well as the storage, maintenance, and testing of B.5.b mitigating equipment. The team selected three fire areas/fire zones (FZ) for detailed review to examine the licensee's implementation of the FPP. The three fire areas chosen for review were selected based on risk insights from the licensee's Individual Plant Examination for External Events, information contained in FPP documents, results of prior NRC triennial fire protection inspections, and in-plant tours by the inspectors. In selecting the B.5.b mitigating strategy sample, the inspectors reviewed mitigating strategy operating license conditions 2.G (Unit 1) and 2.I (Unit 2), licensee submittal letters, safety evaluation reports, licensee commitments, B.5.b implementing procedures, and previous NRC inspection reports. Section 71111.05-05 of the IP specifies a minimum sample size of three FAs and one B.5.b mitigating strategy for addressing large fires and explosions. This inspection fulfilled the requirements of the IP by selecting three FAs and at least one B.5.b mitigating strategy. The three FAs chosen were:

- FA 1-006, FZs 6-A (Rooms 189-190, 193-195, 199), 6-B (Rooms 241-243), 6-C (Room 185), 6-D (Room 191), 6-E (Room 192) Component Cooling Water Pump and Heat Exchanger Room, Elevation 100 foot (ft) – 175 foot, North West (NW) and South West (SW) Quadrant

- FA 1-21A, FZ 21-A (Rooms 229, 233), Unit 1 Train B 4kV Switchgear Room, Elevation 121 ft, SW Quadrant

- FA 1-040, FZ 40-A (Room 318), Unit 1 Cable Spreading Room, Elevation 139 ft, NW Quadrant

For each of the selected fire areas, the inspection team evaluated the licensee's FPP against the applicable NRC requirements. The specific documents reviewed by the team are listed in the Attachment.

.01 Post-Fire Safe Shutdown From Main Control Room (Normal Shutdown)

a. Inspection Scope

Methodology

The team reviewed applicable portions of FNP Units 1 and 2 post-fire safe shutdown analysis A-350971, "Joseph M. Farley Nuclear Plant Units 1 & 2 10 CFR Part 50 Appendix R Fire Protection Program," Rev. 4 (SSA), abnormal operating procedures (AOPs), standard operating procedure (SOP), piping and instrumentation drawings (P&IDs), applicable electrical one-line drawings, the Updated Final Safety Analysis Report (UFSAR), and other supporting documents to verify that hot and cold shutdown could be achieved and maintained from the main control room (MCR) for postulated fires in FA 1-006 (FZs 6-C and 6-E) and FA 1-21A (FZ 21-A).

Plant walkdowns were performed to verify that the plant configuration was consistent with that described in the fire hazards analysis (FHA) and SSA. These inspection activities focused on ensuring the adequacy of systems selected for reactivity control, reactor coolant makeup, reactor heat removal, process monitoring instrumentation, and support system functions. The team reviewed the systems and components credited for use during this shutdown method to verify that they would remain free from fire damage.

Operational Implementation

The team reviewed the adequacy of procedures utilized for post-fire safe shutdown (SSD) and performed walkthroughs of procedure steps to ensure the implementation and human factors adequacy of the procedures. The team also reviewed selected operator actions to verify that the operators could reasonably be expected to perform the specific actions within the time required to maintain plant parameters within specified limits. The team reviewed and performed independent walkthroughs of applicable sections of fire response procedure AOP 29.0, "Plant Fire," Rev. 38 for FA 1-006, FZ 6-C and FZ 6-E and FA 1-21A, FZ 21-A.

Section III.G.2 of 10 CFR Part 50, Appendix R specifies the separation and design requirements to protect one train of cables and equipment necessary to achieve and maintain hot shutdown conditions from fire damage when redundant trains are located within the same fire area. In cases where the separation requirements of Section III.G.2 were not met and local operator manual actions (OMAs) were utilized by the licensee in lieu of cable protection, the team verified during procedure walkthroughs that unapproved OMAs, in the selected fire areas were feasible utilizing the criteria in Attachment 2 of NRC IP 71111.05TTP.

The team reviewed calculation SE-C051326701-007, Revision 2, "Post-Fire Manual Action Feasibility Analysis," to verify that the licensee had identified OMAs for post-fire SSD in 10 CFR 50, Appendix R, Section III.G.2 designated areas and had placed these issues in their corrective action program. For OMAs not previously approved by NRC, the licensee has committed to adopt NFPA 805 and transition the FNP fire protection licensing basis to the performance based standard of 10 CFR 50.48 (c). During this transition, unapproved OMAs are considered compensatory measures according to the FPP. The team verified that the licensee had plans in place to track resolution of OMA issues as part of the plant-wide risk evaluation for transition to NFPA 805.

b. Findings

No findings were identified.

.02 Protection of Safe Shutdown Capabilities

a. Inspection Scope

For the selected FAs/FZs, the team evaluated the potential for fires, the combustible fire load characteristics, and the potential exposure fire severity. The team reviewed the FNP UFSAR, Appendix 9B; Procedure FHA; FNP-0-SOP-0.4, "Fire Protection Program Administration" and, selected plant administrative procedures which established and implemented controls and practices to prevent fires and to control the storage of permanent and transient combustible materials and ignition sources. This review was performed to ensure that the objectives established by the NRC-approved FPP were satisfied. The team also reviewed selected licensee fire incident reports, combustible tracking logs, maintenance procedures, housekeeping inspection reports, and general employee training covering control of ignition sources and transient combustibles. These reviews were accomplished to ensure that the licensee had properly evaluated in-situ combustible fire loads, controlled hot-work activities, and limited transient fire hazards in a manner consistent with the plant administrative and FPP procedures. Additionally, the team toured the selected plant FA/FZs to observe whether programmatic procedures for limiting fire hazards, waste collection, housekeeping practices, and cleanliness conditions were implemented consistent with the UFSAR, administrative procedures, and other FPP procedures. The specific documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

.03 Passive Fire Protection

a. Inspection Scope

For the selected FAs, the team evaluated the adequacy of fire barrier walls, ceilings, floors, mechanical and electrical penetration seals, fire doors, fire dampers and structural steel fireproofing. The team reviewed the installation, repair, and qualification records for a sample of fire doors, fire dampers, and penetration seals to ensure the fire barrier features were of the appropriate fire rating. The team compared the installed barrier configurations to the approved construction details, and supporting fire endurance test data, which established the ratings of the fire barriers. The team verified that the as-built configurations met the engineering design, standard industry practices, and were properly evaluated or qualified by appropriate fire endurance tests. The team reviewed licensee evaluations of the non-standard fire barrier penetration seal configurations for FA 1-21 and FA 1-06. The team also reviewed the FHA to verify the fire loading used by the licensee to determine the fire resistance rating of the fire barrier enclosures. In addition, the team reviewed licensing bases documentation, such as NRC Safety Evaluation Reports (SERs) and exemptions from NRC regulations, to verify that passive fire protection features met license commitments.

The team walked down accessible portions of the selected FAs to observe the material condition of the passive fire barriers. In addition, a sample of completed surveillance and maintenance procedures for selected fire doors, fire dampers, and penetration seals were reviewed to ensure that these passive fire barriers were being properly inspected and maintained. The passive fire barriers included in the review are listed in the Attachment.

b. Findings

No findings were identified.

.04 Active Fire Protection

a. Inspection Scope

For the selected FAs, the team reviewed the adequacy of the design, installation, and operation of the automatic detection and alarm system to actuate in the early stage of a fire. The review included walk downs of the systems and an examination of the types of detectors, detector spacing, the licensee's technical evaluation of the detector locations, and the ceiling, steel beam reinforcing plans to assess whether the areas were protected by fire detectors in accordance with the applicable NFPA code of record requirements. The inspectors also reviewed the FHA, UFSAR Appendix 9B, Section 9B.4.1.13; licensee's submittals; and associated NRC SERs for FAs 1-21 and 1-40 to verify that the fire detection systems for the selected fire areas were installed in accordance with the design and licensing basis of the plant.

The team reviewed the automatic and manual suppression surveillance instructions, as well as, the most recently completed surveillance tests for each of the selected FAs. The team reviewed the fire protection water supply system and operational valve lineups associated with the electric motor-driven and diesel-driven fire pumps and plant fire water distribution piping system. During plant tours, the team observed placement of the fire hoses and extinguishers to verify they were not blocked and were consistent with the fire fighting FZ datasheets and FPP documents.

The team reviewed the secondary fire brigade staging and dress-out areas to assess the operational readiness of fire fighting and smoke control equipment. The fire brigade personal protective equipment and the self-contained breathing apparatus were reviewed for adequacy and functionality. The team also reviewed fire fighting FZ datasheets and fire response procedures for the selected FAs to determine if appropriate information was provided to fire brigade members to identify safe shutdown equipment and to facilitate suppression of an exposure fire that could impact safe shutdown capability. The team walked down the selected FAs to compare the associated datasheets and drawings with as-built plant conditions and fire response procedures. This was done to verify that fire fighting FZ datasheets and drawings were consistent with the fire protection features and potential fire conditions described in the FHA. The inspectors also evaluated whether the fire response procedures and fire zone datasheets for the selected fire areas/rooms could be implemented as intended.

The team also reviewed operator and fire brigade staffing, fire brigade response reports, offsite fire department communications and staging procedures, fire fighting pre-plan strategies, fire brigade qualification training, and the fire brigade drill program

procedures. Fire brigade response-to-drill scenarios and associated brigade drill evaluations/critiques that transpired over the last 12 months for or in the vicinity of the selected FAs/FZs were reviewed. Specific documents reviewed by the team are listed in the Attachment.

b. Findings

No findings were identified.

.05 Protection From Damage From Fire Suppression Activities

a. Inspection Scope

Through a combination of in-plant inspection and drawing reviews, the team evaluated the selected FAs to determine whether redundant trains of systems required for post-fire SSD could be subject to damage from fire suppression activities or from the rupture or inadvertent operation of fire suppression systems. The team considered the effects of water, drainage, heat, hot gasses, and smoke that could potentially damage redundant trains. Additionally, the team checked that fire fighting water would either be contained in the fire affected area or be safely drained off.

The team addressed the possibility that a fire in one FA could lead to activation of an automatic suppression system in another FA through the migration of smoke or hot gases, and thereby adversely affect local operator actions required for SSD. Air flow paths out of the selected FAs were reviewed to verify that inter-area migration of smoke or hot gases would not inhibit necessary local operator actions. This portion of the inspection was carried out through a combination of plant walk-downs and drawings, and records review. Documents reviewed by the team are listed in the Attachment.

b. Findings

No findings were identified.

.06 Post-Fire Safe Shutdown From Outside the Main Control Room (Alternative Shutdown)

a. Inspection Scope

Methodology

The team reviewed the licensee's alternative shutdown (ASD) methodology to verify conformance with applicable requirements for the identified components and systems used to achieve and maintain post-fire SSD conditions for FA 1-040, FZ 40-A. The team reviewed applicable portions of the licensee's analysis, A-350970, "10 CFR Part 50 Appendix R, Fire Protection Program for Operating Nuclear Power Plants, Alternative Shutdown Capability," Rev. 14; UFSAR; procedure FNP-1-AOP-28.1, "Fire or Inadvertent Fire Protection System Actuation in the Cable Spreading Room," Rev. 32; P&IDs; electrical drawings; and other supporting documents for a postulated fire in FA 1-040, FZ 40-A. The reviews focused on ensuring that the required functions for post-fire SSD and the corresponding equipment necessary to perform those functions were included in the procedures. The review included assessing whether hot and cold shutdown from outside the MCR could be implemented, and that transfer of control from

the MCR to the alternative shutdown control stations could be accomplished. This review also included verification that shutdown from outside the MCR could be performed both with and without the availability of offsite power. The team reviewed the adequacy of the systems and components at the hot shutdown panel HSP credited for reactivity control, reactor coolant makeup, reactor heat removal, process monitoring, and support system functions.

Operational Implementation

The team reviewed the training lesson plans for licensed and non-licensed operators to verify that the training reinforced the ASD methodology in the SSA for the selected FAs. The team also reviewed shift turnover logs and shift manning to verify that personnel required for SSD using the alternative shutdown systems and procedures were available on-site, exclusive of those assigned as fire brigade members. The team reviewed operator training lesson plans and job performance measures (JPMs), and discussed the training with operators to verify that ASD activities were appropriately included in the training program.

For a significant fire in FA 1-040, ASD from the Hot Shutdown Panels (HSP) was credited for use for establishing SSD. The team reviewed the operational implementation of the ASD capability for a fire in FA 1-040 to verify: (1) the procedures used for ASD were consistent with the SSA methodology and assumptions; (2) the procedures were written so that the operator actions could be correctly performed within the times assumed in the SSA. The team performed independent walkthroughs of the post-fire ASD procedures FNP-0-AOP-29.0 and FNP-1-AOP-28.1, to verify that the procedures could be performed within the required times, given the minimum required operator staffing level, with or without offsite power. Also, the procedure walkthroughs were performed to ensure the implementation and human factors adequacy of the procedures. The team verified that the operators could reasonably be expected to perform the specific actions within the time required to maintain plant parameters within specified limits. Time critical actions reviewed included: electrical power distribution alignment, establishing control at the dedicated shutdown control stations, establishing reactor coolant makeup, and establishing decay heat removal.

The team also reviewed the periodic test procedures and test records of the alternative shutdown transfer capability, and instrumentation and control functions, to ensure the tests were adequate to verify the functionality of the alternative shutdown capability. Electrical schematics were reviewed to verify that circuits for SSD equipment, which could be damaged due to fire, were isolated by disconnect switches and by swapping power supplies for selected Motor Control Centers. In addition, the team reviewed wiring diagrams for instrumentation located on the alternative shutdown control stations to verify that necessary process monitoring was available as required by 10 CFR 50, Appendix R, Section III.L.

b. Findings

No findings were identified.

.07 Circuit Analyses

a. Inspection Scope

This segment is suspended for plants in transition because a more detailed review of cable routing and circuit analysis will be conducted as part of the fire protection program transition to NFPA 805. However, a review of the licensee's preliminary cable routing information was used by the team to assess the adequacy of the licensee's fire response procedures in the selected fire areas. The routing information was based upon a list of safe shutdown components selected by the inspectors.

b. Findings

No findings were identified.

.08 Communications

a. Inspection Scope

The team reviewed plant communication capabilities to evaluate the availability of the communication systems to support plant personnel in the performance of actions to achieve and maintain post-fire safe shutdown conditions. The team also reviewed the communication systems available at different locations within the plant that would be relied upon to support fire event notification and fire brigade fire fighting activities to verify their availability at different locations. The team reviewed the electrical power supplies and the cable routing for the phone system to ensure that the required communication systems remained functional following a fire in the selected FAs. Specific documents reviewed by the team are listed in the Attachment.

b. Findings

No findings were identified.

.09 Emergency Lighting

a. Inspection Scope

The team reviewed the adequacy of the emergency lighting units (ELUs) used to support plant personnel during post-fire safe shutdown for the selected FAs. The team performed plant walkdowns and observed the placement and coverage area of fixed 8-hour battery pack emergency lights throughout the FAs to evaluate their adequacy for illuminating access and egress pathways and any equipment requiring local operation and/or instrumentation monitoring for post-fire SSD. The team reviewed completed test records of ELU battery 8-hour capacity tests to ensure that they were sized, tested, and maintained consistent with vendor guidance, license requirements, and licensee commitments. This review also included examination of whether backup ELUs were provided for the primary and secondary fire emergency equipment storage locker locations and dress-out areas in support of fire brigade operations should power fail during a fire emergency. The team performed plant walkdowns of FAs to observe the placement and coverage area of credited, fixed 8-hour battery pack ELUs. The team reviewed vendor manuals to ensure that the emergency lights were being maintained

consistent with the manufacture's recommendations. The team also reviewed the battery power supplies to verify they were rated for at least an 8-hour capacity. The team observed a blackout test of normal lighting to demonstrate the emergency lighting adequacy at the Unit 1 dedicated HSP. Specific documents reviewed by the team are listed in the Attachment.

b. Findings

No findings were identified.

.10 Cold Shutdown Repairs

a. Inspection Scope

The team reviewed the licensee's SSA to determine if any repairs were necessary to achieve cold shutdown. The need and provisions for post-fire repairs to transition from hot shutdown to a cold shutdown condition were evaluated by the team in relation to the selected FAs/FZs. SSD procedure AOP 28.1 describes methods for repairing fire damaged equipment needed to bring the unit from hot standby to cold shutdown. The team reviewed procedure EIP-16, "Emergency Equipment and Supplies," and verified through observation that the repair materials were available on the site. Specific documents reviewed by the team are listed in the Attachment.

b. Findings

No findings were identified.

.11 Compensatory Measures

a. Inspection Scope

The team reviewed the administrative controls for out-of-service, degraded, and/or inoperable fire protection features (e.g., detection and suppression systems and equipment, passive fire barriers, or pumps, valves or electrical devices providing SSD functions or capabilities). The team reviewed selected items on the fire protection impairment log and compared them with the FAs/FZs selected for inspection. The compensatory measures that had been established in these FAs/FZs were compared to those specified for the applicable fire protection feature to verify that the risk associated with removing the fire protection feature from service was properly assessed and adequate compensatory measures were implemented in accordance with the approved FPP.

b. Findings

No findings were identified.

.12 B.5.b Mitigating Strategy Review

a. Inspection Scope

The inspectors reviewed the licensee's established program for responding to a large fire or explosion event consistent with the established license condition. The inspectors reviewed, on a sample basis, the licensee's mitigation measures to depressurize the steam generator to reduce inventory loss for a large fire or explosion. The inspectors reviewed applicable SERs and submittals which supported the elements outlined by the license condition. The inspectors reviewed applicable training of staff as well as credited procedures used for strategy implementation. The inspectors also assessed the adequacy of surveillance and maintenance of credited equipment by reviewing a sample of completed records. The inspectors conducted tabletops of applicable strategies under review with licensee personnel credited for responding to an event. The inspectors performed walkdowns with individuals provided by the licensee staff to assess the implementation capabilities of the individuals and the adequacy of procedures.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA2 Identification and Resolution of Problems

a. Inspection Scope

The team reviewed condition reports (CRs) related to the Farley FPP, and the capability to successfully achieve and maintain the plant in a SSD condition following a plant fire, as well as selected fire brigade response, emergency / incidents, and fire safety inspection reports were reviewed. This review was conducted to assess the frequency of fire incidents and effectiveness of the fire prevention program and any maintenance-related or material condition problems related to fire incidents. In addition, the team reviewed a sample of the FPP audits which the licensee performed in the previous one-year period to assess the types of findings that were generated and that the findings were appropriately entered into the licensee's corrective action program (CAP).

The team also reviewed other CAP documents, including completed corrective actions documented in selected CRs, and operating experience program documents to verify that industry-identified fire protection problems potentially or actually affecting CR database were appropriately entered into, and resolved by the CAP process. Items included in the operating experience program effectiveness review were licensee responses NRC Regulatory Issue Summaries, Information Notices, Generic Letters, industry or vendor-generated reports of defects and noncompliance under 10 CFR Part 21, and vendor information letters. The team evaluated the effectiveness of the corrective actions for a sample of identified issues. Specifically, the team performed a detailed review of the corrective actions for NCV (Non-Cited Violation) 05000348, 364/2008006-01,"Fire Protection Credits Unreliable Indication;" NCV 05000364/ 2005006-003, "Unapproved Local OMA for Post-Fire Safe Shutdown;" and NCV 05000364/2008006-02, "Areas Where OMAs Are Performed Did Not Have ELUs

Installed." The team evaluated the thoroughness of the CAP to properly classify and prioritize any safety concerns or action items associated with the CRs. The licensee was transitioning FNP's fire protection licensing basis to 10 CFR 50.48 (c). Corrective actions for the above NCVs were being implemented through this process. The corrective actions to date included performing an extent of condition review, and implementing the appropriate compensatory measures in a manner consistent with safety and compliance. Additionally, the team reviewed the licensee's short term compensatory measures (compensatory fire watches) to verify that they were adequate to compensate for a degraded function or feature until appropriate corrective action could be taken, and that the licensee was effective in returning the equipment to service in a reasonable period of time. The documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

On March 25, 2011, the lead inspector presented the inspection results to Mr. M. Stinson, Site Vice President and other licensee staff members. The licensee acknowledged the findings. A conference call was conducted by the lead inspector with Mr. R. Martin, Engineering Programs Manager, and other licensee staff members on April 29, 2011, to provide an update on changes to the preliminary inspection findings. The NRC subsequently conducted two additional conference calls with members of the licensee's staff on July 7, 2011 and July 13, 2011, to request additional information for in-office review. A final exit was conducted by Ms. P. Braxton on July 22, 2011 with Mr. M. Stinson and other licensee staff members. Proprietary information is not included in this report.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

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D. Davidson, Plant Fire Marshal
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B. Griner, Engineering Director
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LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

Section 1R05.03.a: List of Fire Barrier Features Inspected in Relation to Safe Shutdown Separation Requirements

Fire Barriers Floors/Walls/Ceiling Identification	Description
Concrete Wall	FA 1-06, Room 192
Concrete and Masonry Block Wall	FA 1-21, Room 229

Fire Damper Identification	Description
1-121-115-24	FA 1-21, Room 229
1-121-115-25	FA 1-21, Room 229
1-121-116-01	FA 1-21, Room 229

Fire Door Identification	Description
219	FA 1-21, Room 229
222	FA 1-21, Room 229
176	FA 1-06, Room 192

Fire Barrier Penetration Seal Identification	Description
01-121-22	FA 1-21, Room 229
01-121-31	FA 1-21, Room 229
04-121-31	FA 1-21, Room 229
07-121-31	FA 1-21, Room 229
08-121-22	FA 1-21, Room 229
13-121-22	FA 1-21, Room 229
14-121-22	FA 1-21, Room 229
52-121-22	FA 1-21, Room 229

Structural Steel Fireproofing Identification	Description
Zonolite Mono-Kote	FA 1-40, Room 318

Drawings

1-121-115-24, Press Power Group Fire Damper Installation and Fabrication Details, Rev. 2
1-121-116-01, Ruskin Mfg. Company Fire Damper N1BD 23, Installation and Fabrication Details, Rev. 3
D-170366, Fire Protection P&ID - Yard Mains, Rev. 41
D-170384, Sheets 1-4, Fire Protection P&ID, Unit 1 Low Pressure Carbon Dioxide, Rev. 7
D-175005, P&ID - Unit 1 Aux. Bldg. Drains Non-Radiation Area, Rev. 1
D-175115, HVAC Non-Radiation Area Ductwork @ El. 121'-0", Rev. 30
D-175030, P&ID - Unit 1 HVAC Non-Radiation Area & Equip. Rooms, Rev. 13
D-175034, Unit 1 Instrument Air, Sheet 1, 2 and 3
D-175037, Unit 1 Reactor Coolant System, Sheet 1
D-175038, Unit 1 Safety Injection System, Sheet 1
D-175039, Unit 1 Chemical and Volume Control System, Sheet 6
D-175007, Unit 1 Aux Feedwater System
D-175613, Unit 1 Main Feedwater System, Sheet D-175616, Unit 1 Service Water System
D-175618, Unit 1 Component Cooling Water System, Sheet 1 & 3
D-176028, Unit 1 Architectural Door Details, Door Frame Anchors, Rev. 3

D-176508, Unit 1 Aux. Bldg. Concrete floor Slab @ El. 121'-0", Rev. 24
D-350802, Unit 1 Aux. Bldg. Penetration Seals Plan, Rev. 4
D-350855, Unit 1 Aux. Bldg. Penetration Seals @ El. 121'-0", Rev. 3
D-350862, Unit 1 Aux. Bldg. Penetration Seals @ El. 121'-0", Rev. 2
D-175061, Unit 1 Equipment Locations-Auxiliary and Control Building Area Elevation 139, Rev. 12
D-175057, Unit 1 Equipment Locations-Auxiliary Building Elevation 121, Rev. 30
D-175056, Unit 1 Equipment Locations-Auxiliary Building Elevation 139, Rev. 21
D-175062, Unit 1 Equipment Locations-Auxiliary and Control Building Area Elevation 121, Rev. 14
D-175063, Unit 1 Equipment Locations-Auxiliary and Control Building Area, Rev. 16
D-177001, Unit 1 Single Line-Auxiliary System (Emergency 4160V & 600V), Rev. 15
D-177000, Unit 1 Single Line Electrical-Auxiliary System (Normal 4160V & 600V), Rev. 28
B-508658, Unit 1 Means of Egress-Auxiliary Building Elevation 83 & 77, Sheet 1, Rev. 1
B-508658, Unit 1 Means of Egress-Containment & Auxiliary Building Elevation 100 & 105'6", Sheet 2
B-508658, Unit 1 Means of Egress-Containment & Auxiliary Building Elevation 155, Sheet 5, Rev. 4
B-508658, Unit 1 Means of Egress-Containment & Auxiliary Building Elevation 121 & 129, Sheet 3
B-508658, Unit 1 Means of Egress-Containment & Auxiliary Building Elevation 139, Sheet 4
D-176512, Unit 1 Floor Slab Auxiliary Building Elevation 139, Rev. 21
D-176508, Unit 1 Floor Slab Auxiliary Building Elevation 121, Rev. 24
D-176509, Unit 1 Floor Slab Auxiliary Building Elevation 121 & 127, Rev. 22
D-176505, Unit 1 Floor Slab Auxiliary Building Elevation 121, Rev. 21
D-506278, Unit 1 Radio Antennae and Slotted Coaxial Cable System-Installation and Details, Sheet 1, Rev.4
D-506278, Unit 1 Radio Antennae and Slotted Coaxial Cable System-Installation and Details, Sheet 2, Rev.3
D-506278, Unit 1 &2 Radio Antennae and Slotted Coaxial Cable System-Installation and Details, Sheet 2, Rev.3
D-506278, Unit 1 Radio Antennae and Slotted Coaxial Cable System-Installation and Details, Sheet 3, Rev.1
D-506278, WRM and Telex Antennae System-Installation and Details, Sheet 4
D-177966, Unit 1 Lighting Layout Auxiliary Building Elevation 127 Area 1, Rev. 12
D-176512, Unit 1 Auxiliary Building PA System Block Diagram by Fire Areas-Elevation 121 and Below, Sheet 1, Rev 10
D-17334, Unit 1 Auxiliary Building PA System Block Diagram by Fire Areas-Elevation 130 and Above, Sheet 1, Rev 10
D-177337, Unit 1 Auxiliary Building PAX System Block Diagram by Fire Areas-Elevation 121 and Below, Sheet 1, Rev. 6
D-177337, Unit 1 Auxiliary Building PAX System Block Diagram by Fire Areas-Elevation 139 and Above, Sheet 2, Rev. 3
D-175610, Appendix R Fire Protection Analysis P&ID Main Steam and Auxiliary Steam System, Rev. 2
D-175612, Appendix R Fire Protection Analysis P&ID Auxiliary Feedwater System, Rev. 1
D-175619, Appendix R Fire Protection Analysis P&ID Chemical and Volume Control System-Sheet 1, Rev. 4
D-175619, Appendix R Fire Protection Analysis P&ID Chemical and Volume Control System-Sheet 2, Rev. 4

D-175619, Appendix R Fire Protection Analysis P&ID Chemical and Volume Control System-Sheet 6
D-177224, Miscellaneous Isolation Relays, Sheet 3 Rev.1
D-177224, Miscellaneous Isolation Relays, Sheet 2 Rev.3
D-177591, Solenoid Valves, Sheet 23, Rev. 13
D-177005, Single Line Protection & Metering-4160V Switchgear Bus 1F (Emergency), Rev. 17
D-177006, Single Line Protection & Metering-4160V Switchgear Bus 1G (Emergency), Rev.16
D-177224, Boric Acid Transfer Pumps 1A & 1B, Sheet 1 Rev. 10
D-177186, Auxiliary Feedwater Pump 4160V No. 1A, Rev. 20
D-177009, Single Line Protection & Metering-600V Load Center 1C, Rev. 2
D-177010, Single Line Protection & Metering-600V Load Center 1D, Rev.
D-180549, Tray & Conduit Layout Elevation 139'-0" Area 3; Safe Shutdown Raceway ID and Location of Kaowool Wrap, Rev. 24
D-180548, Tray & Conduit Layout Elevation 139'-0" Area 3; Safe Shutdown Raceway Identification, Rev. 7
D-180547, Tray & Conduit Layout Elevation 139'-0" Area 3; Safe Shutdown Raceway ID and Location of Kaowool Wrap, Rev. 5
D-180545, Tray & Conduit Layout Elevation 139'-0" Area 3; Safe Shutdown Raceway ID and Location of Kaowool Wrap, Rev. 3
D-180545, Tray & Conduit Layout Elevation 139 Area 3; Safe Shutdown Raceway Identification, Rev. 3
D-180544, Tray & Conduit Layout Elevation 139 Area 3; Safe Shutdown Raceway Identification, Rev. 3
D-177696, Tray & Conduit Details & Sections, Auxiliary Building Elevation 121, Rev. 15
D-177717, Tray & Conduit Details & Sections, Auxiliary Building Elevation 121 Area 2 Switchgear Room, Rev 10
D-177716, Tray & Conduit Details & Sections, Auxiliary Building Elevation 121, Rev. 15
D-180520, Tray & Conduit Layout, Safe Shutdown Raceway and Identification, Rev. 13
D-180521, Tray & Conduit Layout Auxiliary Building Elevation 121; Safe Shutdown Raceway ID and Location of Kaowool Wrap, Rev. 8
D-180544, Tray & Conduit Details & Sections; Safe Shutdown Raceway Identification, Rev. 5
D-180522, Tray & Conduit Details & Sections Elevation 121; Safe Shutdown Raceway ID and Location of Kaowool Wrap, Rev. 4
D-180564, Tray & Conduit Details & Sections Elevation 127; Safe Shutdown Raceway ID and Location of Kaowool Wrap, Rev. 9
D-180534, Tray & Conduit Layout Elevation 100 Room 185; Safe Shutdown Raceway ID and Location of Kaowool Wrap Sheet 3, Rev. 2
D-180534, Tray & Conduit Layout Elevation 100 Room 185; Safe Shutdown Raceway ID and Location of Kaowool Wrap Sheet 2
D-180534, Tray & Conduit Layout Elevation 100 Room 185; Safe Shutdown Raceway ID and Location of Kaowool Wrap Sheet 1, Rev. 14
D-180533, Tray & Conduit Layout Elevation 100 Area 2; Safe Shutdown Raceway ID and Location of Kaowool Wrap Sheet 2 Rev. 8
D-180533, Tray & Conduit Layout Elevation 100 Area 2; Safe Shutdown Raceway ID and Location of Kaowool Wrap Sheet 1 Rev. 12
D-177401, Elementary Diagram Atmospheric Steam Dump Valves, Rev. 7
D-177603, Elementary Diagram 575V Motor operated Valves, Rev. 12
D-177591, Elementary Diagram Solenoid Vales, Rev. 3

Procedures

FNP-0-AP-6.0, Procedure Adherence, Rev 23.0
FNP-0-AP-35.0, General Plant Housekeeping and Cleanliness Control, Rev. 33.0
FNP-0-AP-36, Fire Surveillance Procedures and Inspections, Rev. 19
FNP-0-AP-37, Fire Brigade Organization, Rev. 16
FNP-0-AP-38, Use of Open Flame, Rev. 17.0
FNP-0-AP-39, Fire Patrols and Watches, Revision 16
FNP-0-AP-45, FNP Training Plan, Revision 23
FNP-0-ACP-35.2, Flammable Material and Combustible Material Control, Rev. 13.0
FNP-0-AOP-29.0, Plant Fire, Rev. 37
FNP-0-AOP-29.0, Plant Fire, Rev. 38
FNP-AOP-49.0, Security Threat, Rev. 17
FNP-AOP-49.2, Complete Loss of Service Water, Rev. 1
FNP-NMP-EP-402, Emergency Management Guideline, Rev. 8
FNP-0-EIP-6.0, TSC Setup and Activation, Rev. 40
FNP-0-EIP-7.0, Security Support to the Emergency Plan, Rev. 17
FNP-0-EIP-13.0, Emergency Plan Implementing Procedure, Rev. 24.0
FNP-0-EIP-16.0, Emergency Equipment and Supplies, Rev. 57
FNP-0-EMP-1370.02, Installation and Repair of Penetration or Conduit Seals, Rev. 15.0
FNP-0-EIP-16.0, Emergency Equipment and Supplies, Rev. 57
FNP-0-EMP-1381.04, Emergency Lighting Battery Replacement, Rev. 10.0
FNP-0-EMP-1363.01, Sound Powered Phone Functional Test, Rev. 8
FNP-0-EMP-1906.01, Installation and Removal of Temporary Electrical Alterations, Rev 15
FNP-0-FSP-5, Documentation of Fire Drill Critiques, Rev. 2
FNP-0-FSP-58, Fire Hose Stations, Rev. 11
FNP-0-FSP-203.4, Motor Driven Fire Pump Functional Test, Rev. 4
FNP-0-FSP-205.0, Inside Fire System's Valve Operability Test, Rev. 9
FNP-0-FVP-14, Auxiliary Building Smoke and CO_2 /Halon Removal (Portable Equipment), Rev.2
FNP-0-SAG4, Inject into Containment, Rev. 3
FNP-0-SAG6, Control Containment Conditions, Rev. 3
FNP-0-SOP-0.10, System Operating Procedure, Rev. 16.0
FNP-0-SOP-61.0, Fire Protection - Pump House and Yard Main, Rev. 42
FNP-0-SOP-0.11, Farley Nuclear Plant Computerized Control Room Log Signoff Sheet, Rev. 24
FNP-0-M-87, Maintenance Rule Scoping Manual, Rev. 23
FNP-0-STP-60.7, Emergency Beacon Light and Plant Emergency Alarm Operability Test Auxiliary Building Elevation 139 Turbine Building Elevation 173 & 155, Rev 7.0
FNP-SOP-36.3, 600,480, and 208/120 Volt AC, Rev 62
FNP-0-STP-60.8, Emergency Beacon Light and Plant Emergency Alarm Operability Test Auxiliary Building Elevation 121 Turbine Building Elevation 137, Rev. 5
FNP-1-AOP-29.2, Plant Stabilization in Hot Standby and Cooldown without "B" Train AC or DC Power
FNP-1-AOP-28.1, Fire or Inadvertent Fire Protection System Actuation in the Cable Spreading Room, Rev. 32.0
FNP-1-APR-1.12, Annunciator Response Procedure, Rev. 59.0
FNP-1-EEP-0, Reactor Trip or Safety Injection, Rev. 41
FNP-1-ESP-0.1, Reactor Trip Response, Rev. 31
FNP-1-FSP-41.2, Fire Dampers Functional Test, Rev. 16
FNP-1-FSP-63.08, Visual Inspection of Penetration Fire Barriers, Rev. 4
FNP-1-FSP-65.0, Fire Dampers Functional Inspection, Rev. 12
FNP-1-FSP-65.2, Fire Doors Functional Inspection, Rev. 6
FNP-1-FSP-308, Quarterly Maintenance of Emergency Lighting Unit 1 Appendix R, Rev. 20

FNP-1-SACRG-1, Severe Accident Control Room Guideline Initial Response, Rev. 3
FNP-1-SOP-62.1, Back-up Air or Nitrogen Supply to the Pressurizer Power Operated Relief Valves, Rev. 20.0
FNP-1-FSP-311, Semi-Annual Maintenance and Testing of Emergency Lighting Unit 1 Appendix R, Rev. 12
FNP-1-STP-73.1, Hot Shutdown Panel Operability Verification, Rev. 16
FNP-1-STP-73.0, Hot Shutdown Panel Handswitch Position Verification, Rev. 10
FNP-2-AOP-28.1, Fire or Inadvertent Fire Protection System Actuation in the Cable Spreading Room, Rev. 30FNP-1-UOP-2.2, Shutdown of Unit from Hot Standby to Cold Shutdown, Rev. 88
NMP-ES-035, Fire Protection Program, Rev. 3.0
NMP-ES-035-003, Fleet Hot Work Instruction, Rev. 1.0
NMP-TR-425, Fire Drill Program, Rev. 5

Completed Surveillance Test Procedures and Test Records
FNP-1-FSP-63.08, Visual Inspection of Penetration Fire Barriers, WO 1082452001, completed 1/20/2009
FNP-1-FSP-65.0, Fire Dampers Functional Inspection, WO 1041782201, completed 12/26/2005
FNP-1-FSP-65.2, Fire Doors Functional Inspection, Visual Inspection, WO 1080428001, completed 1/15/2010
D-176026, Aux Feedwater Pump Room Fire Door Adjustment, WO 1101960401, completed 2/10/2011
FNP-0-EMP-1363.01, Sound Powered Phone Functional Test, 7/18/08
FNP-0-EMP-1363.01, Sound Powered Phone Functional Test, 3/2/09
FNP-0-EMP-1363.01, Sound Powered Phone Functional Test, 4/3/09
FNP-0-STP-60.0, Emergency Beacon Light and Plant Emergency Alarm Operability Test, 1/23/11
FNP-0-STP-60.7, Emergency Beacon Light and Plant Emergency Alarm Operability Test Auxiliary Building Elevation 139, 2/19/11
FNP-0-STP-60.8, Emergency Beacon Light and Plant Emergency Alarm Operability Test Auxiliary Building Elevation 121, 3/20/10
FNP-0-STP-60.9, Emergency Beacon Light and Plant Emergency Alarm Operability Test Auxiliary Building Elevation 100, 12/18/10
FNP-0-EIP-16.0, Emergency Equipment and Supplies, Attachment JJ, 7/28/10
FNP-0-EIP-16.0, Emergency Equipment and Supplies, Attachment JJ, 1/12/11
FNP-0-EIP-16.0, Emergency Equipment and Supplies, Attachment JJ, 5/5/10
FNP-0-EIP-16.0, Emergency Equipment and Supplies, Attachment JJ, 2/9/10
FNP-0-EIP-16.0, Emergency Equipment and Supplies, Attachment X, 2/1/10
FNP-0-EIP-16.0, Emergency Equipment and Supplies, Attachment X, 4/6/10
FNP-0-EIP-16.0, Emergency Equipment and Supplies, Attachment X, 10/10/10
FNP-0-EIP-16.0, Emergency Equipment and Supplies, Attachment X, 12/13/10
Farley Nuclear Plant Computerized Control Room Log Signoff Sheet, 7/4/10
Farley Nuclear Plant Control Room Log Signoff Sheet, 11/24/10
Farley Nuclear Plant Computerized Control Room Log Signoff Sheet, 11/25/10
Farley Nuclear Plant Computerized Control Room Log Signoff Sheet, 11/26/10
Farley Nuclear Plant Control Room Log Signoff Sheet, 1/1/11
Farley Nuclear Plant Control Room Log Signoff Sheet, 3/10/11

Emergency Lighting Test Records

WO# 64227
WO# 607509
WO# 64216
WO# 525903
WO# 509265
WO# 1029998
WO# 960300
WO# 885081
WO# 1069006
WO# 960296
WO# 960300
WO# 885081
WO# 1024536
WO# 904216
WO# 509265
WO# 488360
WO# 500002
WO# 64221

Calculations

A-177678, Sheet 5-1-114, Combustible Load Calculation for Fire Area Hazards Analysis, Fire Area 1-06, Zone 189, Rev. 81.0
A-177678, Sheet 5-1-133, Combustible Load Calculation for Fire Area Hazards Analysis, Fire Area 1-21, Zone 229, Rev. 81.0
A-177678, Sheet 5-1-146, Combustible Load Calculation for Fire Area Hazards Analysis, Fire Area 1-40, Zone 318, Rev. 67.0
SM-C051326701-006, Determination of Regulatory Fire Barrier Separation Between Fire Areas, Rev. 1
SM-85-1-3286-009, Unit 1 Auxiliary Building Hydraulic Calculation for Water Supply to Sprinkler system 1A-119 (FA 1-6), Rev. 1
A-350970, Units 1 & 2 Alternative Shutdown Capability Report, Rev. 14
A-350971, Joseph M. Farley Nuclear Plant Units 1 & 2 10 CFR Part 50 Appendix R Fire Protection Program, Rev. 4
SE-C051326701-007, Post-Fire Manual Action Feasibility Analysis, Rev. 1
SE-C055326701-001, Circuit Analysis Calculation for Safe Shutdown/Fire PRA Equipment for Farley, Rev 1
SE-C051326701-003, FNP SSEL and Safe Shutdown Fault Tree
SE-C051326701-009, Evaluate RCP Shut Down Seal for NFPA 805 MSO Scenarios, Rev. 1
SE-C051326701-007, Post-Fire Manual Action Feasibility Analysis, Rev. 2

Design Changes

DCR 2070406101, Addition of Unit 2 Appendix R Emergency Lights, Rev.1
DCR 2062851001, Enhancement of Unit 2 and Shared Appendix R Emergency Lights
DCR C070406001, Addition of Unit 1 and Shared Appendix R Emergency Lights

Applicable Codes and Standards

Fire Protection Handbook, 17th Edition
NFPA 13, Installation of Sprinkler Systems, 1972-1985 Editions
NFPA 14, Standard for the Installation of Standpipe and Hose Systems, 1973-1985 Editions
NFPA 20, Standard for the Installation of Centrifugal Fire Pumps, 1973 Edition
NFPA 72D, Standard for the Installation, Maintenance, and Use of Proprietary Protection Signaling Systems, 1975 Edition
NFPA 80, Standard on Fire Doors and Windows, 1970 Edition
NFPA 90A, Standard on Air Conditioning and Ventilating Systems, 1981 Edition
NFPA 805, Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants, 2001 Edition
NUREG-1552, Supplement 1, Fire Barrier Penetration Seals in Nuclear Power Plants
OSHA Standard 29 CFR 1910, Occupational Safety and Health Standards
Underwriters Laboratory Standard 555, Standard for Fire Dampers and Ceiling Dampers

Factory Mutual Loss Prevention Data Sheet 5-4/14-8, dated 09/86
Factory Mutual Research Approval Guide, Transformer Fluids, dated 01/02

Training Documents
S-FP-CT-200904-00, Lesson Plan for Continuing Training, Operating Experiences, Rev. 0
S-FP-PP-10800-02, Lesson Plan for Fire Fighting (in Room 229), Rev. 0
FNP Fire Brigade Qualification Summary Information (Course F-FP-111), dated 03/21/2011
Fire Drill Critique-Approval Packages (NMP-TR-425-F01) for 12/16-17/2010

Technical Manuals and Vendor Information
Data Sheet for Fenwal Detect-A-Fire Heat Detectors, Series 27100, dated May 1999
Data Sheet for Zonolite Mono-Kote Fire Resistance Ratings, dated April 1967
Data Sheet for Pyrotronics Ionization Smoke Detector, Models DIS-5B, and DIS-3/5A, dated June 1973
Factory Mutual Loss Prevention Data Sheet 5-4/14-8, dated 09/86
Factory Mutual Research Approval Guide, Transformer Fluids, dated 01/02
Patterson Pump Division, Fire Pump Performance Curve, U-160250-A, dated 11/24/1971
Specification SS-1102-65, FNP Unit 1, Hollow Metal Doors, Pressed Steel Frames and Hardware, Rev. 11
Steel Door Institute SDI 111-2009, Standard Steel Door, Frames, Accessories and Related Components, dated 2009
Steel Door Institute SDI 111-A, Standard Steel Door Frames, Details, dated 2008
Underwriters Laboratory Inc. (UL) Report for Fire Test of Floor and Ceiling Assembly Protected with Type MK Cementous Mixture, UL Design No. 40
Big Beam S6L, Specification Sheet, 11/7/99
U217424A, Instruction Manual for Teledyne Big Beam Emergency Light, Rev. A
FNP-0-SOP-0.19, Operation of the Q-RAE Plus PGM-2000 Combustible Gas and Oxygen Monitor
SO-549A, Job Performance Measures, Manual Operation of SG Atmospheric Relief
TPE-SO-628, Task Performance Evaluation Guide, Operate the Q-4AE Plus PGM-2000 Combustible Gas and Oxygen Meter
OPS-62521C, Student Text for AOP-28.2, Fire or Inadvertent Fire Protection System Actuation on the Cable Spreading Room
SO-610, Job Performance Measures, Isolate the TDAFW Pump Steam Supply from B SG at the Hot Shutdown Panel

Licensing Basis Documents
Appendix A to Branch Technical Position (BTP) APCSB 9.5-1 Guidelines for Fire Protection for Nuclear Power Plants, dated 08/23/1976
FNP Fire Protection Operating License Conditions 2.C (4) (Unit 1) and 2.C (6) (Unit 2)
FNP Mitigation Strategy Operating License Conditions 2.G (Unit 1) and 2.I (Unit 2)
FNP UFSAR Appendix 9B, Plant Fire Protection Program, Rev.22
FNP UFSAR Appendix 9B, Plant Fire Protection Program, Rev. 23
FNP UFSAR Appendix 9B, Attachment A, Fire Hazards Analysis, Rev. 21
FNP UFSAR Appendix 9B, Attachment B, 10 CFR 50 Appendix R Exemptions, Rev. 21
FNP UFSAR Appendix 9B, Attachment C, Operability and Surveillance Requirements for Fire Suppression Systems, Fire Detection Systems, And Fire Barrier Penetrations Required to Support the Safe Shutdown of Farley Nuclear Plant, Rev. 23
FNP Fire Protection SERs, dated 05/02/1975, 02/12/79, 08/24/83, 11/19/85, 09/10/86 and 12/29/86

NRC Review of FNP Exemption From the Requirements of 10 CFR PART 50, APPENDIX R, dated 03/22/2006
NRC Letter to FNP, SECY-99-182, Assessment of the Impact of Appendix R Fire Protection Exemptions on Fire Risk, dated 4/17/2000
FNP Letter to NRC, Comments on SECY-99-182, Assessment of the Impact of Appendix R Fire Protection Exemptions on Fire Risk, dated 6/29/2000
FNP Letter of Intent to Adopt the 2001 Edition of NFPA 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants," dated 02/14/2008

Audits and Self Assessment Reports
A-508661, Fire Rated Penetration Seal Qualification Document, Rev. 0
BM-99-1932-001, Internal Flooding Assessment, Rev. 2
ES-90-1773, Evaluation of Floor Drains in Rooms with Water as Primary Fire Suppressant, dated 2/27/1991
F-FP-2010, QA Audit of fire Protection, dated 9/29/10
Fire Protection Health Reports, 1st, 2nd, 3rd, & 4th Quarters 2008; 1st Quarter 2009; and, 3rd, Quarter 2010
Fire Protection Program Overall Health Report, dated 10/29/2010
REA-98-1691, FNP Comprehensive Fire Door Evaluation, dated 10/15/1998
Triennial Fire Protection Readiness Self Assessment, dated 1/25-28/11

Fire Protection Pre-Plans Fire Zone Data Sheets
A-508651, Sheets 2 & 3, Fire Zone Data Sheet Legend, Rev. 1
A-508650, Sheets 12, 12A & 13, Fire Zone Data Sheet, Aux. Building Zone 6, EL. 100'-0", Rev. 2
A-508650, Sheet 14, Fire Zone Data Sheet, Aux. Building Zones 6, 1, & SO1, EL. 100'-0", Rev. 2
A-508650, Sheet 16, Fire Zone Data Sheet, Aux. Building Zones 20, 21, 23, & SO1, EL. 121'-0", Rev. 5
A-508650, Sheet 20, Fire Zone Data Sheet, Aux. Building Zones 12, 15, 18, 19, 20, & 23, EL. 121'-0", Rev. 13
A-508650, Sheet 21, Fire Zone Data Sheet, Aux. Building Zones 1, 8, & 9, EL. 121'-0", Rev. 1
A-508650, Sheet 30, Fire Zone Data Sheet, Aux. Building Zones 13, 40, 42 & 51, EL. 139'-0", Rev. 11

Work Orders/Request
1090224101, Appendix R Emergency Lighting, completed 8/10/10
1080661101, Appendix R Emergency Lighting, completed 2/10/10
1072365401, Appendix R Emergency Lighting, completed 8/5/09
1090824201, Appendix R Emergency Lighting, completed 9/27/10
1072802001, Appendix R Emergency Lighting, completed 10/7/09
1070868901, Appendix R Emergency Lighting, completed 10/9/08
1090824101, Appendix R Emergency Lighting, completed 9/1/10
1090623501, Appendix R Emergency Lighting, completed 6/28/10
1071709701, Appendix R Emergency Lighting, completed 5/13/09
1081307701, Appendix R Emergency Lighting, completed 5/14/10
1082315801, Appendix R Emergency Lighting, completed 5/19/10
1090224201, Appendix R Emergency Lighting, completed 8/2/10
C036023201, Work order for RER-03 232 ELU inadequacies in Main Steam Valve Room, Lower Equipment room, and 139'0" Hallway to Cable Spreading Room, completed 4/18/05

39471, Work Request, Repair of Mono-Kote in Ceiling of Cable Spreading Room, dated 10/27/1981
1101656801, Hot Shutdown Panel Instrumentation Channel Check, completed 10/17/2010
1070675801, Verification of CCW to Miscellaneous HEADER mov-3047 Operation from the Hot Shutdown Panel, completed 4/12/2009
1070675901, Verification of Reactor Head Vent Valve Operation from the Hot Shutdown Panel, completed 4/29/2009
WO 2072414101

Other Documents

IN 2005-03, Inadequate Design and Installation of Seismic-Gap Fire Barriers
IN 2006-02, Use of Galvanized Supports and Cable Trays with Meggitt Mi 2400 Stainless Steel Jacketed Electrical Cables
IN 2009-10, Transformer Failures-Recent Operating Experience
FNP Fire Protection Administration – Unit 1 Comprehensive LCO Listing, dated 2/4/2011
RIS 2005-07, Compensatory Measures to Satisfy the Fire Protection Program Requirements
RIS 2005-30, Clarification of Post-Fire Safe shutdown Circuit Regulatory Requirements
RIS2006-10, Regulatory Expectations with Appendix R Paragraph III.G.2 Operator Manual Actions
Emergency Lighting System (1R45-2R45) Health Report, 3rd Qtr 2010
Emergency Lighting System (1R45-2R45) Health Report, 1st Qtr 2010
NMP-AD-002-F03, 121ft Non-Rad E-Light Simulated Blackout Test, completed 3/24/11
RER C051326701, Perform Evaluations On All Required Diagnostic Instrumentation for Safe Shutdown
Appendix R Emergency Light Excellence Plan
Project/Quality Plan for Fire Protection Program Transition to 10 CFR 50.48(c) NFPA 805, ARCPlus, Transition and Multiple Spurious Operation Resolution, Rev. 5
FNP Active Hourly Firewatch Report, dated 1/31/11
FNP Active Continuous Firewatch Report, dated 1/31/11
FNP-OAD-37, B.5.B Tool inventory and Locations
FNP-OAD-38, B.5.B Pump Yearly Maintenance Manual
NL-08-1256, Revision of B.5.b Phase 3 Mitigation Strategy Commitments
NL-07-2372, Revision of B.5.b Phase 3 Mitigation Strategy Commitments
NL-07-0013, Revision of B.5.b Phase 3 Mitigation Strategy Commitments

Condition Reports Generated as a Result of This Inspection

CR 2009101129, Instrument and Sensing Line Fire Vulnerability
CR 2011103163, Lack of Quality Control Test for Snap Time and Density for Silicon Foam Penetration Seals
CR 2011102889, Correction of FNP Fire Protection Program Definitions for “Fire Area” and “Fire Zone” to be Consistent with Current Regulatory Guidance
CR 2011103044, Evaluate Whether Circuit Routings for Sump Pumps in Rooms 185, 192, 193, 189, and 241 are Required for SSA
CR 2011103051, Electric Driven fire Pump Not Currently in the FNP SSA
CR 2011103090, Evaluate the Validity of FNP FSAR 9.B.4.1.3.2 Statement Concerning ½-hr Cable Enclosures
CR 2011103096, MOU with Dothan Fire Department Discrepancy
CR 2011103099, Seal missing on Fire Brigade Locker
CR 2011103102, Evaluate combining step 6 and 11 of FNP-0-AOP-29.0 Revision 38 to Address C02 discharge
CR 2011103109, Compliance of Fire Detector Placement Requirements of NFPA 72

CR 2011103114, NFPA Code Reconciliation for NFPA 72D-2007 for Detection Purchase Order QP110144
CR 2011103125, Engineering Evaluations in FSAR for Deviations from NFPA Codes of Record
CR 2011103128, Monitoring and Trending Plan for the Fire Protection System was not Developed
CR 2011103157, AOP-29.0, ATTCH 9, Step 8 placed SO in a Potentially Hazardous Location
CR 2011103158, Develop Fire Protection Walk Down Documentation Described in NMP-ES-035
CR 2011103163, Current test methods for 3-6548 Dow Corning RTV should match Vendor Guidance
CR 2011103236, Establish Periodic Evaluation for Temp Ventilation for 1B Battery Room
CR 2011103239, AOP-29.0 Instrument Tables use reverse logic for Operations
CR 2011103241, AOP-29.0 ATTCH 12, Steps 3 and 4 Contain Similar Actions
CR 2011103244, AOP-29.0 Step 8 Requires and Evaluation that Could Result in Shutdown
CR 2011103421, AOP-29.0 ATTCH 9, Step 5.1 is not in Appendix R FPP Exemption Request
CR 2011103452, Current Testing of FNP Fire Pumps do not meet NEIL Loss Control Standard A4.2.8.8
CR 2011103523, Establish Transformer Tank Press. Limitations for Use with Transformer Oil DC-561
CR 2011103685, Insulation for FA FWH Dump to Contion Line Tees is Falling Apart
CR 2011103721, Enhancements to NMP-EP-402 noted during TFPI walkdown
CR 2011103799, Revise NMP-GM-002-0001 to Ensure Review of Fire Brigade Response for Room Entry for Degraded Doors
CR 2011103803, Evaluate the Inclusion of all FNP Fire Protection Program Design Basis Documents in the NFPA 805 Design Basis Review
CR 2011103865, Adequacy of Emergency Lighting to Support Post-Fire SSD Actions are Untimely
CR 2011103867, During TFPI Walkdowns the Interior for A-HSDP did not meet FNP Standards for Housekeeping
CR 2011103882, Identify E-lites that are not directed appropriately and E-lites that Need Lens Cover Cleaned
CR 2011103879, Elight on AB 121', Rad Side, 208 Hallway is not Adequate to Support Post-Fire SSD
CR 2011103901, TFPI identified that no Exemption Request Existed for MOA to Restore Instrument Air to the PORV's
CR 2011103914, During TFPI Walkdowns Rotameter Test Methodology Needs to be Reviewed
CR 2011103916, During TFPI Walkdowns the Fire Brigade Turnout Items Were Found Missing from Lockers
CR 2011103918, During TFPI Walkdowns the Fire Brigade Lockers (15 of 20) Were Found with the Correct Seals Missing
CR 2011103920, Discrepancies between SSD Analysis and AOP-28.1 Step 15.4.1, Seal Injection Flow not Analyzed
CR 2011103923, FNP-1-ARP-1.12 Incorrectly Found with Pencil Markings Utilized
CR 2011103969, AOP-29.0 and AOP-29.2 Found with Unapproved OMAs and No Exemption Request
CR 2011103074, Discrepancies with FSAR and Fire Barriers
CR 2011103986, E-Light 1134 does not provide adequate illumination
CR 2011103987, E-Light 1132 does not provide adequate illumination

Other Condition Reports Reviewed During This Inspection

CR2009114825, Root Cause Investigation for Fire in the Unit 1 Component Cooling Water Heat Exchanger Room, Rev. 1
CR2011103128, Lack of Monitoring and Trending Plan for Fire Protection Systems in Accordance with Section 5.13 of NMP-ES-035
CR 2011100973, Feasibility of FNP-0-AOP-29.0
CR 2010112867, Compensatory Measures for CRs 2011100971 and 201100974
CR 2011100971, OMAs in Fire Area 1-006 Zone 2 is not feasible
CR 2011100974, OMAs in Fire Area 2-006 Zone 2 is not feasible
CR 2002001841, Apparent Inadequate Emergency Lighting in Main Steam Valve Room, Lower Equipment room, and 139'0" Hallway to Cable Spreading Room
CR 2002001861, Evaluate NFPA 101 Life Safety Code Study Evaluation for Emergency Lighting for Fire Brigade Emergency Operations
CR 2005102567,
CR 2005103500, Testing of Emergency Lights
CR 2005103499, Testing of Emergency Lights
CR 2005102567, Testing Needs To Be Performed on Unit 1 Appendix R Emergency Lighting for Operator Actions per FNP-0-AOP-29.0
CR 2005102753, Testing Needs To Be Performed on Unit 1 Appendix R Emergency Lighting for Operator Actions per FNP-0-AOP-29.0
CR 2008103337, Compensatory Measures to Perform Manual Actions
CR 2008103336, Adequacy of Emergency Lighting to Perform Manual Actions
CR 2008103335, Procedure Change Reviews Did Not Evaluate Adequacy of Emergency Lights
CR 2006108310, SNC's position for operator manual actions
CR 2008103503, OPS use of instrumentation may not be reliable for RCP operational diagnosis
CR 2005103665, Demonstrate ability to achieve safe shutdown for compliance to Appendix R
CR 2005103629, Evaluate Reformatting of Fire Procedures AOP-28.2 and AOP 29.0
CR 2005103688, Manual Operator Actions Needed for Safe Shutdown Not Approved By NRC
CR2009101130, Unreviewed Operator Manual Actions

LIST OF ACRONYMS

AOP	Abnormal Operating Procedure
ASD	Alternative Safe Shutdown
CAP	Corrective Action Program
CCW	Component Cooling Water
CFR	Code of Federal Regulation
CR	Condition Report
DCP	Design Change Package
EL	Elevation
ELU	Emergency Lighting Unit
EOP	Emergency Operating Procedure
FA	Fire Area
FHA	Fire Hazards Analysis
FNP	Joseph M. Farley Nuclear Plant
FPP	Fire Protection Program
FZ	Fire Zone
GL	Generic Letter
HSP	Hot Shutdown Panel
HVAC	Heating, Ventilation, and Air Conditioning
IMC	Inspection Manual Chapter
IN	Information Notice
IP	Inspection Procedure
IPEEE	Individual Plant Examination for External Events
JPM	Job Performance Measure
MCC	Motor Control Center
MCR	Main Control Room
MSVR	Main Steam Valve Room
NCV	Non-Cited Violation
NFPA	National Fire Protection Association
NRC	U. S. Nuclear Regulatory Commission
NW	North West
OEP	Operating Experience Program
OMA	Operator Manual Action
OSHA	Occupational Safety and Health Administration
PORV	Pressure Operated Relief Valve
P&IDs	Piping and Instrumentation Drawings
RER	Request for Engineering Review
RIS	Regulatory Issue Summary
ROP	Reactor Oversight Process
SCBA	Self-Contained Breathing Apparatus
SDP	Significance Determination Process
SER	Safety Evaluation Report
SOP	Standard Operating Procedure
SSA	Safe Shutdown Analysis
SSD	Safe Shutdown
SSER	Supplemental Safety Evaluation Report
SW	South West
TDAFW	Turbine Driven Auxiliary Feedwater
TFPI	Triennial Fire Protection Inspection
UFSAR	Updated Final Safety Analysis Report
VFDR	Variances From Deterministic Requirements
WO	Work Order