



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
SAM NUNN ATLANTA FEDERAL CENTER  
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ATLANTA, GEORGIA 30303-8931**

October 17, 2003

Southern Nuclear Operating Company, Inc.  
ATTN: Mr. J. B. Beasley, Jr.  
Vice President  
P. O. Box 1295  
Birmingham, AL 35201-1295

**SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT - NRC INTEGRATED INSPECTION  
REPORT 05000348/2003004 AND 05000364/2003004**

Dear Mr. Beasley:

On September 27, 2003, the US Nuclear Regulatory Commission (NRC) completed an inspection at your Joseph M. Farley Nuclear Plant, Units 1 and 2. The enclosed integrated inspection report documents the inspection results, which were discussed on September 30, 2003, with Mr. Todd Youngblood and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel. Based on the results of this inspection, no findings of significance were identified.

In accordance with 10 CFR 2.790 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 the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm.html> (the Electronic Reading Room).

Sincerely,

*/RA/*

Brian R. Bonser, Chief  
Reactor Projects Branch 2  
Division of Reactor Projects

Docket Nos.: 50-348, 50-364  
License Nos.: NPF-2, NPF-8

Enclosure: Inspection Report 05000348/2003004,  
05000364/2003004  
w/Attachment: Supplemental Information

cc w/encl: (See page 2)

SNC

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| NAME         | CRapp:vyg | TJohnson  | SRose     | CPatterson | WSartor   | SVias      | KMaxey     | WBearden   | RCortes    |
| DATE         | 10/8/2003 | 10/8/2003 | 10/8/2003 | 10/8/2003  | 10/8/2003 | 10/14/2003 | 10/9/2003  | 10/14/2003 | 10/14/2003 |
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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.: 05000348/2003004 and 05000364/2003004

Licensee: Southern Nuclear Operating Company, Inc.

Facility: Farley Nuclear Plant

Location: 7388 N. State Highway 95  
Columbia, AL 36319

Dates: June 29 - September 27, 2003

Inspectors: T. Johnson, Senior Resident Inspector (SRI)  
S. Rose, Resident Inspector  
C. Patterson, SRI, Turkey Point  
R. Reyes, Resident Inspector, Crystal River 3  
C. Rapp, Senior Project Engineer  
S. Vias, Senior Reactor Inspector (Sections 1R02, 1R17)  
R. Cortes, Reactor Inspector (Sections 1R02, 1R17)  
K. Maxey, Reactor Inspector (Sections 1R02, 1R17)  
W. Sartor, Reactor Inspector (Sections 1EP2 - 1EP5)  
W. Beardon, SRI Browns Ferry (Section 1R12)

Approved by: Brian Bonser, Chief  
Reactor Projects Branch 2  
Division of Reactor Projects

Enclosure

## SUMMARY OF FINDINGS

IR 05000348/2003-004, 05000364/2003-004; 06/29/2003 - 09/27/2003; Joseph M. Farley  
Nuclear Plant, Units 1 & 2; Quarterly Integrated Report.

The report covered a three month period of inspection by resident inspectors and a regional senior project engineer, and announced inspections by regional reactor inspectors. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. NRC-Identified and Self-Revealing Findings

No findings of significance were identified.

B. Licensee-Identified Violations

None

## REPORT DETAILS

### Summary of Plant Status

Unit 1 operated at or near 100 percent Rated Thermal Power (RTP) for the entire inspection period.

Unit 2 operated at or near 100 percent RTP for the entire inspection period, except for a reduction to 15 percent RTP on July 26, to repair a hydrogen leak on the main generator.

#### 1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

#### 1R01 Adverse Weather Protection

##### a. Inspection Scope

The inspectors evaluated the implementation of procedures FNP-0-AOP-21.0, Severe Weather, and FNP-0-EIP-9.0, Emergency Classification and Actions, during the hurricane and hot weather seasons to verify the required planning and compensatory measures for equipment affected by high temperature, winds, and flooding were satisfactorily completed. In addition, the inspectors reviewed the licensee's implementation of river water flood protection measures. The inspectors walked down safety-related, risk significant, and fire protection equipment to verify adequate adverse weather protection measures were taken. The inspectors interviewed selected personnel to assess their training and knowledge relative to adverse weather preparedness. The inspectors also reviewed open work orders to verify the work orders did not adversely affect hot weather, hurricane, or river flooding readiness for the following systems:

- Building sumps and related pumping systems
- Off site power and switch yard
- On site emergency diesel generators (EDGs)
- DC and AC distribution systems
- Turbine Driven Auxiliary Feedwater (TDAFW) systems
- River Water Intake Structure

##### b. Findings

No findings of significance were identified.

#### 1R02 Evaluations of Changes, Tests or Experiments

##### a. Inspection Scope

The inspectors reviewed the six evaluations listed in the Attachment to confirm that the licensee had appropriately considered the conditions under which changes to the facility, Updated Final Safety Analysis Report (UFSAR), or procedures may be made, and tests conducted, without prior NRC approval. The inspectors reviewed evaluations

for these six changes and additional information, such as calculations, supporting analyses, the UFSAR, and drawings to confirm that the licensee had appropriately concluded that the changes could be accomplished without obtaining a license amendment.

The inspectors also reviewed samples of changes such as design changes, UFSAR changes, commercial grade dedication packages, a procedure change, a Technical Specification Bases change, and a Selected Licensee Commitments change for which the licensee had determined that evaluations were not required, to confirm that the licensee's conclusions to "screen out" these changes were correct and consistent with 10CFR50.59. The 23 "screened out" changes reviewed are listed in the Attachment.

The inspectors also reviewed a recent audit of the 10CFR50.59 process and selected Condition Reports (CRs) to confirm that problems were identified at an appropriate threshold, were entered into the corrective action process, controlled by procedure NMP-GM-002, Corrective Action Process, and appropriate corrective actions had been proposed.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

a. Inspection Scope

The inspectors performed three partial system walk downs to verify the systems listed below were properly aligned when redundant systems or trains were out of service. The walk downs were performed using the criteria in procedures FNP-0-AP-16, Conduct of Operations - Operations Group, and FNP-0-SOP-0, General Instructions to Operations Personnel. The walk downs included checks of control room and in-plant alignment of valves, switches, components, electrical power, support equipment, and instrumentation. Documents reviewed are listed in the Attachment.

- Unit 1 A train EDGs during a 1B EDG planned outage
- Unit 2 Service Water (SW) system during a cyclone separator equipment outage
- Unit 2 A train EDGs during a 2B EDG planned outage

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

Fire Area Walkdowns: The inspectors walked down the six fire areas listed below to verify the licensee's control of transient combustibles, the operational readiness of the fire suppression system, and the material condition and status of fire dampers, doors,

and barriers. The inspectors also checked that compensatory measures, including fire watches, were in place for degraded fire barriers. The inspectors reviewed procedures FNP-0-AP-36, Fire Surveillance and Inspection; FNP-0-AP-38, Use of Open Flame; FNP-0-AP-39, Fire Patrols and Watches; and the associated Fire Zone Data sheets.

- Auxiliary Building Fire Area 2-1
- Auxiliary Building Fire Area 2-35
- Auxiliary Building Fire Area 1-34
- Service Water Structure Fire Area 71
- Diesel Building Fire Area 58
- Diesel Building Fire Area 61

Fire Drill Observation: The inspectors observed the drill conduct, critique, and documentation of corrective actions to verify the drill was conducted per drill package FNP-0-TCP-17.21, Fire Brigade Drills.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures

a. Inspection Scope

The inspectors reviewed the licensee's internal flooding mitigation procedures and equipment to verify they were consistent with the licensee's design requirements and risk analysis assumptions. For internal flooding, the inspectors reviewed the UFSAR and Individual Plant Examination (IPE) and walked down the areas listed below which contained risk-significant structures, systems and components (SSCs) below flood level to verify flood barriers were in place. Water-tight doors were observed to verify they were closed as required by licensee procedures, the locking mechanism functioned properly, and the sealing gasket material was intact and undamaged. The inspectors reviewed completed Surveillance Test and Preventative Maintenance (PM) work packages listed in the Attachment to verify the Technical Specification (TS) and PM requirements were met. The inspectors also reviewed selected Alarm Response Procedures to verify alarm setpoints and setpoints for sump pump operation were consistent with the UFSAR, the setpoint index, and TS. Documents reviewed are listed in the Attachment.

- Unit 1 and Unit 2 Motor Driven Auxiliary Feedwater (MDAFW) and TDAFW pump rooms - 100 foot elevation
- Unit 1 and Unit 2 residual heat removal (RHR) Pump rooms - 83 foot elevation
- Unit 1 and Unit 2 Component Cooling Water (CCW) Pump rooms - 100 foot elevation

The inspectors reviewed the seven CRs listed in the Attachment to verify the licensee was identifying and correcting problems associated with flood detection and protection of SSCs.



b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

a. Inspection Scope

The inspectors observed portions of the licensed operator training and testing program to verify implementation of procedures FNP-0-AP-45, Farley Nuclear Plant Training Program; FNP-0-TCP-17.6, Simulator Training Evaluation Documentation; and FNP-0-TCP-17.3, Licensed Operator Continuing Training Program. The inspectors observed scenarios conducted in the licensee's simulator for an anticipated transient without a trip, stuck control rods and emergency boration, reactor trip with safety injection, loss of coolant accident, steam generator tube rupture, and an off site radioactive release. The inspectors observed operator ability to take timely actions that were risk significant, emergency plan classification and implementation, use of procedures, alarm response, group dynamics and communications, self-critiques, training feedback, and management oversight to verify operator performance was evaluated against the performance standards of the licensee's scenario. In addition, the inspectors observed implementation of the applicable Emergency Operating Procedures to verify the requirements of FNP-0-AP-16 and FNP-0-TCP-17.6 were met. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

Resident Review: The inspectors reviewed the following two maintenance issues to verify implementation of procedures FNP-0-M-87, Maintenance Rule Scoping Manual; FNP-0-SYP-19, Maintenance Rule Performance Criteria; and FNP-0-M-89, FNP Maintenance Rule Site Implementation Manual; and compliance with 10 CFR 50.65. The inspectors assessed the licensee's evaluation of appropriate work practices, common cause failures, functional failures, maintenance preventable functional failures, repetitive failures, availability and reliability monitoring, trending and condition monitoring, and system specialist involvement. The inspectors also interviewed maintenance personnel, system specialists, the maintenance rule coordinator, and operations personnel to assess their knowledge of the program.

- CRs 2003001295 and 2003000395, Unit 2 2F Vital Inverter
- CRs 2003001332, 2003000570 and 2003000576, Unit 1 B1G Vital Sequencer

Biennial Review: The inspectors reviewed the licensee's Maintenance Rule (MR) periodic assessment which covered the period from January 2001 until December 2002. The assessment report was issued to satisfy paragraph (a)(3) of 10 CFR 50.65.

Additionally, the inspectors reviewed selected MR monthly reports, monthly (a)(1) system status reports and MR expert panel meeting minutes. The inspectors reviewed information to verify that the assessment was issued in accordance with the time requirements of the MR and included evaluation of: balancing reliability and unavailability; MR (a)(1) and (a)(2) activities; and use of industry operating experience. To verify compliance with 10 CFR 50.65, the inspectors reviewed selected MR activities covered by the assessment period from the following risk significant systems: TDAFW, Vital Inverters, 600 Volt Load Center (LC) breakers, and 600 Volt Motor Control Center (MCC) breakers. Additionally, the inspectors reviewed licensee actions associated with corrective actions and reclassification of three systems: 4160V breakers, containment cooler drains, and diesel starting air check valves previously classified as MR (a)(1). Procedures and documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation

a. Inspection Scope

The inspectors assessed the licensee's planning and control for the following six planned maintenance activities to verify the requirements in procedures FNP-0-ACP-52.1, Guidelines for Scheduling of On-Line Maintenance; AP-FNP-0-AP-52, Equipment Status Control and Maintenance Authorization; and FNP-0-AP-16 and the Maintenance Rule risk assessment guidance in 10CFR50.65 a(4) were met. The inspectors reviewed the risk assessment and observed actions to minimize overall risk, configuration control, work controls, pre-job briefings, management involvement, job planning and execution, and problem identification and resolution.

- Unit 1 - 1B EDG planned outage
- Unit 1 - Spent Fuel Pool work
- Unit 2 - SW cyclone separator outage
- Unit 2 - 2B EDG planned outage concurrent with 2A (B train) CCW out of service
- Unit 2 - 2B battery charger testing concurrent with 2D SW pump outage
- Unit 1 - 1B Auxiliary Building (AB) battery cell number six replacement

b. Findings

No findings of significance were identified.

#### 1R14 Personnel Performance During Non-routine Plant Evolutions

##### a. Inspection Scope

For the two non-routine events described below, the inspectors assessed the licensee's use of operating procedures, surveillance test procedures, annunciator procedures, abnormal and emergency operating procedures, control room actions, command and control, post event recovery, management involvement, training expectations, previous CRs, maintenance work history, and communication. The inspectors reviewed operator logs, plant computer data, control room strip charts, post event/trip report, and discussed actions with operations personnel. Documents reviewed are listed in the Attachment.

- Unit 2 forced outage to repair a hydrogen leak
- Unit 2 main condenser low vacuum alarms

##### b. Findings

No findings of significance were identified.

#### 1R15 Operability Evaluations

##### a. Inspection Scope

The inspectors reviewed the following six operability evaluations to verify that they met the requirements of procedures FNP-0-AP-16 and FNP-0-ACP-9.2, Operability Determination (OD). This review included an assessment of technical adequacy, consideration of degraded conditions, and identification of compensatory measures. The inspectors reviewed the evaluations against the design bases, as stated in the UFSAR and Functional System Descriptions (FSD), to verify system operability was not affected.

- Unit 1 CCW surge tank vent valve slow stroke time
- Unit 1 Digital Rod Position Indication (DRPI) (CRs 2003001177, 2003001269, 2003001952, 2003001953)
- 1-2A EDG lube oil foaming (CR 2003001934)
- Unit 1 1B AB battery cell sulfate buildup (CR 2003001983)
- Unit 1 1C SW pump minimum flow line pin hole leak (OD-03-05)
- Unit 1 1B AB battery cell number six low voltage

##### b. Findings

No findings of significance were identified.

1R16 Operator Work-Arounds (OWAs)a. Inspection Scope

The inspectors reviewed the following five OWAs to determine if the functional capability of the related system or human performance in responding to an initiating event were not affected and the prioritization of required actions met the requirements of licensee procedure FNP-0-ACP-17, Operator Work-Arounds.

- Unit 2 TDAFW flow control valve 3228A leak
- Unit 1 DRPI erratic indications
- Unit 2 containment pressure recorder
- Unit 1 and 2 fire alarm panel bypass power supply
- Unit 2 AFW flow control valve 3227C remote position indication

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modificationsa. Inspection Scope

Resident Review: The inspectors reviewed the following two plant modifications, to verify the implementation of procedure FNP-0-AP-8, Design Modification Control. This included verification that the design bases, licensing bases, and performance capability of risk significant SSCs would not be degraded through the modifications and the modifications would not place the plant in an unsafe condition. The inspectors also observed the Plant Review Board (PRB) approval of these Design Change Packages (DCPs), discussed the modifications with the engineering and operations personnel, and reviewed the related procedures and drawings.

- S-00-01-9867, Safety Related Pumps' Machine Guard Installation
- S-02-01-9787, 9788, 9789, and 9802, Unit 1 Cooling Tower Replacements

Biennial Review: The inspectors evaluated design change packages for 11 modifications, in the Initiating Events, Barrier Integrity, and Mitigating Systems cornerstone areas, to evaluate the modifications for adverse affects on system availability, reliability, and functional capability. The modifications and the associated attributes reviewed are as follows:

- DCP-99-1-9535      Pressurizer Relief Valve 1B Clearance Problem, Q1B13V0318 (Barrier Integrity)
  - Pressure Boundary
  - Structural
  - Material Capability

- DCP-98-1-9416 Turbine Building Pipe Support (Initiating Events)
  - Structural
  - Seismic Qualification
- DCP-97-1-9209 Snubber Reduction - CVCS Inside CTMT (Mitigating Systems)
  - Structural
  - Seismic Qualification
- DCP-1998-1-9430 U1 Aux Feedwater Flow Indication (Mitigating Systems)
  - EQ Program
  - Accidents Considerations
  - Seismic Qualification
- DCP-2002-1-9837 1A SW Motor Junction Box Modification (Mitigating Systems)
  - Seismic Qualification
  - Structural Analysis
- DCP-1999-1-9506 Provide SI Bypass for MOV-8803B (Mitigating Systems)
  - Seismic Qualification
  - Accident Considerations
- DCP01-1-9747 Reroute Power Cable for the 1B MDAFW Pump and Room Cooler (Mitigating Systems)
  - Energy Needs
  - Equipment Protection
  - Failure Modes Bounded by Existing Analysis
  - Seismic Qualification
- DCP 02-1-9810 Replacement Capacitors for the TDAFW Pump UPS Inverter (Mitigating Systems)
  - Energy Needs
  - Heat Removal
  - Failure Modes Bounded by Existing Analysis
- DCP 03-1-9880 1A SW Motor Swap Out/ Undo DCP S02-1-9837 RW Motor At SW (Mitigating Systems)
  - Energy Needs
  - Material Compatibility
  - Process Medium
  - Operations Training
- DCP 00-1-9562 RWST Level Instrumentation, Scaling and Alarm Setpoint Changes (Mitigating Systems)
  - Response Time
  - Control Signals
  - Operation Procedures and Training
- DCP 00-2-9605 Grounding for Auxiliary and Startup Transformers (Initiating Events)

- Energy Needs
- Material Compatibility
- Failure Modes Bounded by Existing Analysis

For selected modification packages, the inspectors observed the as-built configuration. Documents reviewed included procedures, engineering calculations, modifications design and implementation packages, work orders, site drawings, corrective action documents, applicable sections of the living UFSAR, supporting analyses, Technical Specifications, and design basis information.

The inspectors also reviewed selected CRs associated with modifications to confirm that problems were identified at an appropriate threshold, were entered into the corrective action process, and appropriate corrective actions had been initiated.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope

The inspectors reviewed the criteria contained in procedures FNP-0-ACP-52.1 and FNP-0-AP-52 to verify post-maintenance test procedures and test activities for the following six items were adequate to verify system/component operability and functional capability.

- Unit 1 DRPI system
- 2B MDAFW pump
- 2B steam generator feed pump repair
- 1B EDG post outage testing
- 2B EDG post outage testing
- 1B AB battery cell replacement

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors reviewed surveillance test procedures and either witnessed the test or reviewed completed test records for the following six surveillance tests to determine if the test adequately demonstrated equipment operability and met the TS requirements. The inspectors reviewed the activities to assess for preconditioning of equipment, procedure adherence, and valve alignment following completion of the surveillance. The inspectors reviewed procedures FNP-0-AP-24, Test Control; FNP-0-M-050, Master List

of Surveillance Requirements; and FNP-0-AP-16. The inspectors attended selected briefings to determine if procedure requirements were met.

- FNP-1-STP-80.1, 1B EDG Operability Test
- FNP-1-STP-22.19, AFW Normal Flow Path Verification
- FNP-1-STP-22.16, TDAFW Quarterly Inservice Test
- FNP-2-STP-27.1, AC Power Sources Verification
- FNP-1-STP-905.4, 1B 125 VDC AB Battery Quarterly Test
- FNP-2-STP-22.16, TDAFW Quarterly Inservice Test

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed the following two minor design changes (MDCs), and associated 10 CFR 50.59 screening criteria, against the system design bases and the licensee's guidelines in procedure FNP-0-AP-8. The inspectors reviewed implementation, configuration control, post-installation test activities, drawing and procedure updates, and operator awareness for these temporary modifications.

- MDC M03-2-9896, Main Generator Hydrogen Temporary Leak Repair
- MDC M03-2-9444, Removal of Chemistry Lab Fire Barrier

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP2 Alert and Notification System Testing

a. Inspection Scope

The inspector evaluated the alert and notification system (ANS) design and the testing program. The system consisted of 3 sirens and approximately 3015 Tone Alert Radios within the 10-mile emergency planning zone. The radios were tested weekly and the sirens had a weekly silent test, quarterly growl test, and an annual full cycle test.

b. Findings

No findings of significance were identified.

### 1EP3 Emergency Response Organization Augmentation

#### a. Inspection Scope

The inspector reviewed the design of the emergency response organization augmentation system and the maintenance of the licensee's capability to staff emergency response facilities within stated timeliness goals.

#### b. Findings

No findings of significance were identified.

### 1EP4 Emergency Action Level and Emergency Plan Changes

#### a. Inspection Scope

The inspector reviewed changes to the Emergency Plan and the emergency action levels (EALs) to determine whether any of the changes decreased the effectiveness of the Emergency Plan. The current Farley Nuclear Plant Emergency Plan was Revision 38, dated December 12, 2002. The review was performed against 10CFR 50.54(q) and no apparent decrease in effectiveness was identified.

#### b. Findings

No findings of significance were identified.

### 1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies

#### a. Inspection Scope

The inspector evaluated the efficacy of licensee programs that addressed weaknesses and deficiencies in emergency preparedness. Items reviewed included exercise and drill critique reports and the corrective actions identified therefrom. There had been no actual implementations of the Emergency Plan since the last inspection.

#### b. Findings

No findings of significance were identified.

### 1EP6 Drill Evaluation

#### a. Inspection Scope

The inspectors observed two emergency plan drills to verify the licensee was properly classifying the events, making required notifications, making protective action recommendations, and activating emergency response facilities as required by procedure FNP-0-EIP-9.0. The inspectors observed or reviewed the emergency plan drill scenario, team work and communications, identification of weaknesses and



deficiencies, corrective action documentation, conduct of self-assessments, management involvement, and overall performance to verify that these activities were conducted in accordance with procedure FNP-0-EIP-15.0, Emergency Drills.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification

a. Inspection Scope

The inspectors sampled licensee submittals for the PIs listed below to verify the accuracy of the PI data reported. PI definitions and guidance contained in procedure FNP-0-AP-54, Preparation and Review of NRC Performance Indicator Data, and NEI 99-02, Regulatory Assessment Performance Indicator Guideline, Revision 2, were used.

Mitigating Systems Cornerstone

- Unit 1 and Unit 2 Residual Heat Removal (RHR) safety system unavailability
- Unit 1 and Unit 2 High Head Safety Injection safety system unavailability

The inspectors reviewed selected LERs, portions of Unit 1 and Unit 2 operator log entries, daily morning reports (including the daily CR descriptions), the monthly operating reports, and PI data sheets to determine whether the licensee adequately identified the system unavailable hours for the period from April 2002 through March 2003. The inspectors also reviewed this data to verify the accuracy of the number of critical hours reported and the licensee's basis for crediting the data. In addition, the inspectors interviewed licensee personnel associated with the PI data collection, evaluation, and distribution.

Emergency Preparedness Cornerstone

- Emergency Response Organization (ERO) Drill/Exercise Performance
- ERO Drill Participation
- Alert and Notification System Reliability

The inspector reviewed a sample of drill and event records assessed the accuracy of the PI for ERO drill and exercise performance (DEP) over the past eight quarters. The inspector reviewed training records to assess the accuracy of the PI for ERO drill participation during the previous eight quarters for personnel assigned to key positions in the ERO. The inspector assessed the accuracy of the PI for the alert and notification system reliability through review of a sample of the licensee's records of the weekly silent test, quarterly growl test, and annual full cycle test.

b. Findings

No findings of significance were identified.

#### 4OA2 Problem Identification and Resolution

##### a. Inspection Scope

The inspectors reviewed the following two root cause reports: Unit 1 Degraded Grid Voltage Test Failures (CRs 2003000570, 2003000576 ) and Unit 1 DRPI Troubleshooting Personnel Error Event (CR 2003001952) to verify that equipment, human performance, and program issues were being identified and corrected as required by procedures FNP-0-AP-30, Preparation and Processing of Condition Reports Program; FNP-0-ACP-9.1, Root Cause; and FNP-0-ACP-9.3, Focused Self Assessments. These samples were selected based on their importance to risk, nuclear safety, and personnel safety. The inspectors attended several management meetings which reviewed the issues and corrective actions, reviewed the reports and related CRs, and discussed the reports with root cause team members.

##### b. Findings and Observations

No findings of significance were identified. The inspectors noted that the root cause evaluations were thorough and timely. Corrective actions appeared to be effective and addressed the root causes.

#### 4OA6 Meetings, Including Exit

On September 30, the inspectors presented the inspection results to Mr. Todd Youngblood and other members of his staff who acknowledged the findings. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

## SUPPLEMENTAL INFORMATION

### KEY POINTS OF CONTACT

#### Licensee Personnel:

R. Badham, Administration Manager  
C. Buck, Chemistry/Health Physics Manager  
R. Coleman, Outage and Modification Manager  
C. Collins, Assistant General Manager - Plant Support  
K. Dyar, Security Manager  
D. Grissette, Plant General Manager  
J. Johnson, Assistant General Manager - Operations  
R. Martin, Engineering Support Manager  
B. Moore, Maintenance Manager  
C. Nesbitt, Training and Emergency Preparedness Manager  
W. Oldfield, Quality Assurance Supervisor  
L. Stinson, Nuclear Support General Manager, Farley Project  
R. Vanderbye, Emergency Preparedness Coordinator  
T. Youngblood, Operations Manager  
P. Crone, Licensing Supervisor  
P. Harlos, Health Physics Superintendent  
T. Livingston, Chemistry Manager  
R. Wells, Operations Superintendent

#### NRC Personnel:

B. R. Bonser, Chief, Reactor Projects Branch 2

### LIST OF DOCUMENTS REVIEWED

#### **Section 1R02: Evaluations of Changes, Tests or Experiments**

##### Evaluations

DCP-1998-1-9430, U1 Aux Feedwater Flow Indication  
DCP-2002-1-9837, 1A SW Motor Junction Box Modification  
DCP-1999-1-9506, Provide SI Bypass for MOV-8803B  
DCP 98-2-9358, SGR Unit 2 Instrumentation and Setpoint Changes  
DCP 01-2-9717, Main Steam Vibration Instrumentation  
MD-03-2733, Temporary Piping Installation for Filtered Water Storage Tank Repair to  
NSP27LS505 (FWST Low Level Switch) Penetration

##### Screened Out Items

DCP-99-1-9535, Pressurizer Relief Valve 1B Clearance Problem, Q1B13V0318  
DCP-98-1-9416, Turbine Building Pipe Support  
DCP-97-1-9209, Snubber Reduction - CVCS Inside CTMT  
DCP01-1-9747, Reroute Power Cable for the 1 B MDAFW Pump and Room Cooler  
DCP 02-1-9810, Replacement Capacitors for the TDAFW Pump UPS Inverter  
DCP 03-1-9880, 1A SW Motor Swap Out/ Undo DCP S02-1-9837 RW Motor At SW  
DCP 00-1-9562, RWST Level Instrumentation, Scaling and Alarm Setpoint Changes  
DCP 00-2-9605, Grounding for Auxiliary and Startup Transformers

EVAL-02-154, RCS Loose Parts Evaluation  
 DCP-2002-0976, Reactor Vessel CRDM Repair/Modifications  
 DCR-B99-2-9539, Reactor Cavity Fuel Manipulator Crane Upgrades  
 DCR-S01-1-9704, TDAFWP Monitoring and Testing System  
 MDC-2003-1-9895, Charging Pump Recirc to RCS Hot Leg Drain Root Valve Leak Repair  
 DCP-2002-2-9843, U2 MSIV Locking Plate Modification  
 NDR-136, Diesel Lube Oil  
 NDR-135, Hydraulic Performance of repaired pump is less than the design value  
 M02-1-9844, Stationary and Moveable Gripper Coil Isolation Diode Removal  
 ED-QC-02-0-681, Approval of Ashcroft Remote Mounted Duratemp Thermometer, 8/26/02  
 ED-QC-03-0-696, Approval of Soditrance Sodium Monitor, 6/26/03  
 ABN-99-0-1625, Review of CST Capacity Assuming Rupture of Unprotected AFW lines, 1/9/01  
 SECL-01-002, RHR Butterfly Valve Test Criteria, 3/15/01  
 FNP-0-CGDP-117, Commercial Grade Dedication Plan: Pressure Gauge, 8/4/97  
 FNP-0-CGDP-115, Commercial Grade Dedication Plan: Control Relays, 4/16/96

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

##### Procedures

FNP-1(2)-SOP-24, SW System  
 FNP-1(2)-AOP-1, RCS Leakage  
 FNP-0-SOP-38, Diesel Generators  
 FNP-0-SOP-0.10, Diesel Generator Reliability Program  
 FNP-1(2)-ARP-0001, Main Control Board Annunciator Panel  
 FNP-1(2)-AOP-10, Loss of SW

##### Other Documents

EDG System Functional System Description (FSD) - A181005  
 SW System Functional System Description (FSD) - A181001  
 Technical Specifications 3.7, 3.8  
 UFSAR Sections 8, 9  
 PI&D D-170058, 170060, 170800 thru 170809, 170013, 200013

#### **Section 1R06: Flood Protection**

##### Procedures

FNP-2-STP-215.7, Flooding Detector Functional Test  
 FNP-1-STP-215.7A, Main Steam Relief Valve Flood Detectors  
 FNP-0-IMP-422.2, Float Chamber Level Switch Calibration  
 FNP-0-SOP-0.0, General Instructions to Operations Personnel  
 FNP-1/2-SOP-50.2, Liquid Waste Processing System and Auxiliary Building Sump Pump Operation  
 FNP-1/2-SOP-50.2A, Liquid Waste Processing System and Auxiliary Building Sump Pump Operation Checkoff List  
 FNP-1/2-SOP-50.6, Liquid Waste Processing System Miscellaneous Sump Pump Operation  
 Unit 1 and 2 Alarm Response Procedures, FNP-1/2-ARP-1.1- AD1, AE1, AE3, LF2, LG2, LH2, LA2, LB2, LC2, LE2, NE3, NF2, NG2, NH2, NA2, NB2, NC2, NG2, PH3, and PG4

##### Other Documents

Final Safety Analysis Report (FSAR) Sections 3 and 9

System Descriptions A-181000, A-181001, A-181008, and A-181009,  
 FNP-B175968 (Unit 1 Setpoint Index)  
 FNP-B205968 (Unit 2 Setpoint Index)  
 IPE, Farley Units 1 and 2, Sections 3.3.8 and 3.4  
 IPEEE, Farley Units 1 and 2, Sections 1.3.3, 2.3.3, 5.2, 7, and 8

Condition Reports

2002002791, 2002002846, 2003001616, 2003001865, 2003001833, 2003001498, 2003001497

**Section 1R11: Licensed Operator Requalification**

Procedures

FNP-1-ARP-0001, Main Control Board Annunciator Panel  
 FNP-1-ESP-0.1, Reactor Trip Recovery  
 FNP-1-EEP-0, Reactor Trip or SI  
 FNP-1-EEP-3, SGTR  
 FNP-1-ECP-3.1, SGTR With Loss of Reactor Coolant Subcooled Recovery Desired  
 FNP-1-ESP-3.1, Post SGTR Cooldown Using Backfill  
 FNP-1-FRP-H.1, Response to Loss of Secondary Heat Sink  
 FNP-1-FRP-S.1, Response to an Anticipated Transient Without a Trip  
 FNP-0-AP-30, Preparation and Processing of Condition Reports and Licensee Event Reports  
 FNP-0-AOP-13, Loss of Feed Water  
 FNP-0-AOP-8, Loss of Condenser Vacuum  
 FNP-0-AOP-17, Rapid Load Reduction  
 FNP-0-TCP-17.6, Simulator Training Evaluation/Documentation

Other Documents

Licensed Operator Continuing Training Simulator Exercise Guide, OPS-56400A

**Section 1R12: Maintenance Effectiveness**

Procedures

FNP-0-SYP-16, Maintenance Rule Duties and responsibilities, Rev 3  
 FNP-0-SYP-17, Maintenance Rule Monitoring and Reporting, Rev 4  
 FNP-0-SYP-19, Performance Criteria for Systems Under the Scope of the Maintenance Rule,  
 Rev 4  
 FNP-0-M-87, Maintenance Rule Scoping Manual, Rev 12  
 FNP-0-M-89, Maintenance Rule Site Implementation Manual, Rev 10

Condition Reports

2001000452, 120 VAC exceeded MR performance criteria  
 2002001874, During rescoping effort MR expert panel determined that Unit 1 SGBD isolation valves had exceeded MR performance criteria  
 2002001875, During rescoping effort MR expert panel determined that Unit 2A MDAFW pump room cooler had exceeded MR performance criteria  
 2002001876, During rescoping effort MR expert panel determined that SW dilution bypass valves had exceeded MR performance criteria  
 2002001877, During rescoping effort MR expert panel determined that Unit 2 SW lube and cooling had exceeded MR performance criteria

2002002588, During review MR expert panel determined that DG alarms had exceeded MR performance criteria

2002002773, MR goal not satisfied for 4160 volt breakers

2003000258, December 2002 MR periodic assessment recommendations

2003000303, 1A Condensate Pimp exceeded MR unavailability performance criteria

2003001333, Unit 1 B SGFP exceeded MR plant level performance criteria

2003001295, Unit 2 Inverter 2F exceeded MR performance criteria

2003001296, 7300 Analog Protection System exceeded MR performance criteria

2003001332, Unit 1 B1G Sequencer exceeded MR performance criteria

#### Other Documents

Farley Nuclear Plant Maintenance Rule Periodic Assessment Report, dated December 2002

MR Expert Panel Meeting #30 Minutes, May 9, 2001

MR Expert Panel Meeting #38 Minutes, August 20, 2002

MR Expert Panel Meeting #43 Minutes, April 27, 2003

MR Expert Panel Meeting #44 Minutes, May 20, 2003

MR Monthly Report, July 2003

600 V LC Breaker Monthly (a)(1) System Status Report, November 1999

600 V LC Breaker Monthly (a)(1) System Status Report, August 2003

600 V MCC Breaker Monthly (a)(1) System Status Report, August 2003

#### **Section 1R14: Personnel Performance During Non-routine Plant Evolutions**

##### Procedures

FNP-2-ARP-0001, Main Control Board Annunciator Panel

FNP-2-AOP-8, Loss of Condenser Vacuum

FNP-1-AOP-17, Rapid Load Reduction

##### Other Documents

Control Room Operator Logs

#### **Section 1R17: Permanent Plant Modifications**

##### Procedures

FNP-0-AP-88, 10CFR50.59 Screening and Evaluations

FNP-0-AP-88, Nuclear Safety Evaluations

FNP-0-AP-98, Licensing Document Change Notice

FNP-0-ACP-88.1, Applicability Determination

FNP-0-MP-3.3, Removal and Installation of a Pressurizer Safety valve

FNP-0-AP-8, Design Modification Control

FNP-0-PMP-100, Design Change Engineering Evaluation Preparation

FNP-0-PMP-101, Engineering Completion Review

FNP-0-PMP-105.0, General Instructions to Personnel Implementing Design Changes

FNP-0-ACP-8.4, Minor Design Changes

FNP-0-QCP-20, Procurement Deviation Evaluations

FNP-0-QCP-6, Accepting Commercial Grade Dedication Items for Use as Basic Components

NMP-GM-002, Corrective Action Process

**Section 1EP5: Correction of Emergency Preparedness Weaknesses and Deficiencies**

Corporate Quality Assurance of Plants Farley, Hatch, and Vogtle Offsite Emergency

Preparedness Support dated April 18, 2003.

CR 2003001895