UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
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July 21, 2004

Southern Nuclear Operating Company, Inc.
ATTN: Mr. L. M. Stinson
Vice President
P. O. Box 1295
Birmingham, AL 35201-1295

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT - NRC INTEGRATED INSPECTION REPORT 05000348/2004003 and 05000364/2004003

Dear Mr. Stinson:

On June 26, 2004, the U.S. 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 findings, which were discussed on July 2, 2004, with Mr. Don Grissette 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 with 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 by the NRC. However, two licensee-identified violations, which were determined to be of very low safety significance, are listed in Section 4OA7 of the enclosed inspection report. If you contest these non-cited violations, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the United States Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Farley Nuclear Plant.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, 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/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

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

Docket Nos. 50-348 and 50-364
License Nos. NPF-2 and NPF-8

Enclosure: Inspection Report 05000348/2004003 and
05000364/2004003
w/Attachment: Supplemental Information

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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.:	05000348/2004003 and 05000364/2004003
Licensee:	Southern Nuclear Operating Company, Inc. (SNC)
Facility:	Joseph M. Farley Nuclear Plant
Location:	7388 N. State Highway 95 Columbia, AL 36319
Dates:	March 28, 2004-June 26, 2004
Inspectors:	C. Patterson, Senior Resident Inspector R. Fanner, Resident Inspector
Approved by:	Brian R. Bonser, Chief Reactor Projects Branch 2 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000348/2004-003, 05000364/2004-003; 3/28/2004-6/26/2004; Joseph M. Farley Nuclear Plant, Units 1 & 2; routine integrated report.

The report covered a three-month period of inspection by resident inspectors. Two Green non-cited violations were identified by the licensee. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after management review. 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

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

REPORT DETAILS

Summary of Plant Status

Unit 1 operated at or near 100 percent Rated Thermal Power (RTP) during this report.

Unit 2 was shut down March 13, 2004, to begin a refueling outage. During low power physics testing following completion of the refueling outage, the reactor tripped on April 11 and again on April 12. Both trips were due to circuit card failures in the solid state protection system. On April 16, while at 31 percent RTP, a turbine runback occurred and the turbine was tripped. The unit returned to power operation on April 17 and reached 100 percent RTP on April 20. The unit operated at or near full power the remainder of the report period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection

a. Inspection Scope

Seasonal Readiness Review. The inspectors evaluated the implementation of procedures FNP-0-AOP-21.0, Severe Weather, and FNP-0-EIP-9.0, Emergency Classification and Actions, prior to hurricane and hot weather seasons to verify the required planning and compensatory measures for equipment affected by prolonged high temperature, winds, or tornados were satisfactorily completed. 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, corrective action history, and industry operating experience for the following three systems that could be impacted by or problems introduced as a result of high temperature, winds, or tornados. Documents reviewed are listed in the Attachment.

- Control room ventilation
- Service Water (SW)
- Containment cooling

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

a. Inspection Scope

Partial Walk-downs. 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 licensee procedures FNP-0-AP-16, Conduct of Operations - Operations Group, and FNP-0-SOP-0, General Instructions to Operations Personnel. The walk-downs included reviewing the Updated Final Safety Analysis Report (UFSAR), plant procedures and drawings, and checks of control room and plant valves, switches, components, electrical power line-ups, support equipment, and instrumentation.

- Alignment of 2A & 2B battery chargers while the 2C battery charger was out of service for electrical maintenance
- 1B and 2B Emergency Diesel Generators (EDG) while 1-2A EDG was out of service for 6-month preventive maintenance checks
- Alignment of 1A and 1B SW train while the 1E service water (SW) pump was out of service for lube and cooling valve repair DR 3002306

Complete Walkdown. The inspectors conducted a complete walk-down of the accessible portions of the Unit 2 High Head Safety Injection (HHSI) system while 2B Centrifugal Charging Pump (CCP) pump was isolated for repair of the discharge check valve. The inspectors used licensee procedures FNP-2-SOP-2.1, Chemical and Volume Control System Plant Startup and Operation; FNP-0-GMP-27.2, Disassembly, Inspection, Repair and Reassembly of Safety Related and Non-Safety Related Check Valves; FNP-0-ACP-7.0, Foreign Material Exclusion Program; FNP-2-STP-40.7, ECCS Branch Line Flow Test Verification and Charging Pump Low Discharge Head Flow Test; the UFSAR; and Drawing D-205039-6 to verify adequate system alignment of on-service equipment, electrical power availability, labeling, hangers and support installation, and support systems status.

The inspectors also interviewed personnel and reviewed control room logs, Maintenance Rule (MR) monthly reports, condition reports (CRs), outstanding work orders, industry operating experience on check valves, and branch line flow test results to verify that alignment and equipment discrepancies were being identified and appropriately resolved. CR 200300990 is further discussed in Section 4OA2.2.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

Fire Area Tours. The inspectors conducted a walk-down of the 10 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. To verify implementation, the inspectors also checked that compensatory measures, including fire watches, were in place for degraded fire barriers. The requirements were described in licensee 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. In addition, the inspectors reviewed procedure change FNP-0-ACP 35.2, Flammable Material, Combustible Material, and Chemical Product Control, that established interim compensatory measures to limit transient combustible materials in areas having large penetration seals with less than a three-hour rating.

- Unit 1 Component Cooling Water (CCW) heat exchanger room, Fire Zone 6
- Unit 2A Motor driven auxiliary feedwater pump (MDAFW) room, Fire Zone 6
- Unit 2B MDAFW room, Fire Zone 6
- Unit 1 4160 Switchgear Room, Fire Zone 41
- Unit 1 Piping Penetration Room, Fire Zone 34
- Unit 1 Residual Heat Removal (RHR) pump room hallway, Fire Zone 1
- Unit 1 Cable Spreading Room, Fire Zone 40
- Unit 1 hallway local hot shutdown panel room, Fire Zone 12
- Unit 1B DC switchgear room, Fire Zone 19
- Unit 1A DC switchgear room, Fire Zone 18

Fire Drill. On June 10, the inspectors observed an unannounced fire drill for a fire in the Unit 1 CCW pump room. After the fire alarm was initiated, all fire brigade members arrived immediately and began donning the required protective gear. The inspectors observed the drill debrief which discussed minor communication issues as well as the positive aspects of response and team management.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures

a. Inspection Scope

The inspectors reviewed UFSAR Sections 2.4 and 2.9 and licensee procedure FNP-0-AOP-21.0, Severe Weather, Sections I and IV, to verify that plant design features and plant procedures for flood mitigation were consistent with the design requirements and risk analysis assumptions. The inspectors performed a walkdown of the following three areas to determine potential sources of internal flooding, the

condition of penetrations in the rooms, and the condition of the sumps in the rooms. In addition, an inspection of underground valve boxes and cable pull boxes was conducted. The inspectors also reviewed CRs and maintenance work orders to verify the licensee was identifying and resolving problems. Documents reviewed are listed in the Attachment.

- Unit 1 CCW pump room
- Unit 2 CCW pump room
- Equipment room located between CCW pump room and AFW pump rooms

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

a. Inspection Scope

Quarterly Resident Review. On June 15 the inspectors observed portions of the licensed operator simulator training during a Steam Generator Tube Rupture using backfill methodology with a leak on a reactor coolant loop 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 high risk operator actions, overall performance, 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 listed in the attachment to verify that licensee expectations in procedures FNP-0-AP-16 and FNP-0-TCP-17.6 were met.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed the following three issues to verify implementation of licensee 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.

- CR 2004001903, Functional failure of the 1A containment spray pump cooler fan
- CR 2004002166, Fuel oil transfer pump seal leak
- CR 2004002115, 2A containment spray pump casing drain leak

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 licensee activities to verify the requirements in licensee 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, Conduct of Operations - Operations Group; and the MR risk assessment guidance in 10CFR50.65 a(4) were met.

- Replacement of failed wide range pressure indicator PT-403 following failure (CR 2004001396)
- Replacement of 1B auxiliary building battery cell numbers 24 and 35 (CR 2004001730)
- Calibration of pressure differential switches for SW to TB valves Q1P16V515 and Q1P16V517 which provide leak and phase A isolation protection(CR 2004001977)
- Removal and repair of manual fuel oil transfer system for 2B EDG
- Repair of seal injection regulator controller Q2E21HCV0186 (WO M 04003458)
- Switchyard support struck by backhoe (CR 2004002236)

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Non-Routine Plant Evolutions and Events

a. Inspection Scope

For the following three non-routine events, 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 trip during unit restart on April 11 due to High source range (SR) flux rate caused by faulty solid state protection system card.
- Unit 2 trip during unit restart on April 12 due to High SR flux rate caused by faulty solid state protection system card.
- Unit 2 load rejection/turbine run back event on April 16 due to error in turbine control system.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following seven operability evaluations to verify they met the requirements of licensee procedures FNP-0-AP-16, and FNP-0-ACP-9.2, Operability Determination (OD), for 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, to verify system operability was not affected.

- CR 2004001406, 2C CCP baseline data high head
- CR 2004001493, 2E SW Pump past operability
- CR 2004001881, 1A MDAFW pump wear products in oil analysis
- OD 04-05, Tracer Gas testing results of the control room ventilation
- CR 2004002388, Gas accumulation in the suction side of the 2B charging pump
- CR 2004001672, CCW Train Inoperable During Mode Change
- CR 2004001839, Turbine-Driven Auxiliary Feedwater (TDAFW) Inoperable During Mode Change

b. Findings

No findings of significance were identified.

1R16 Operator Work-Arounds

a. Inspection Scope

Significant Work-Around Review. The inspectors reviewed the following two operator work-arounds 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.

- CR 2004001782 to address canal make-up valve loss of auto-control (Q2P16V560)

- WO 4001381 to address leaking valve from AFW to B Steam Generator (Q1N23HV3228B)

Cumulative Review. The inspectors reviewed the cumulative effects of the operator work-arounds to verify they did not affect the operator's ability to perform actions in both abnormal and emergency operating procedures, did not increase initiating event frequency, and did not affect multiple mitigating systems.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications

a. Inspection Scope

The inspectors reviewed the following plant modification 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 or 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 discussed the modifications with engineering and operations personnel, and reviewed the related procedures and drawings.

- S-03-0-9866, Independent Spent Fuel Storage Installation and Security and Electrical Modifications

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

The inspectors reviewed the criteria contained in licensee procedures FNP-0-ACP-52.1, Guidelines for Scheduling of On-Line Maintenance; FNP-0-PMT-0.0, Post Maintenance Test Program; and procedures listed below to verify post-maintenance test procedures and test activities for the following five systems/components were adequate to verify system operability and functional capability:

- FNP-1-STP-22.1, 1A AFW Quarterly Inservice Surveillance Test after scheduled maintenance activity
- FNP-2-STP-23.2, 2B CCW Pump Quarterly Inservice Test after scheduled maintenance activity
- FNP-2-STP-16.1, 2A Containment Spray Pump Quarterly Inservice Test after casing drain leak repair and FME intrusion

- FNP-2-STP-24.1, SW Pump 2A, 2B, 2C Quarterly Inservice Test
- FNP-0-STP-80.1,1-2A DG Operability Test after scheduled 6 month preventive maintenance

b. Findings

No findings of significance were identified

1R20 Refueling and Outage Activities

a. Inspection Scope

The inspectors reviewed the following activities related to the Unit 2 Spring 2004 refueling outage for conformance to licensee procedures FNP-0-UOP-4.0, General Outage Operations Guideline, and FNP-1-UOP-4.1, Refueling Outage Operation. Surveillance tests were reviewed to verify results were within the TS required specification. Shut-down risk, management oversight, procedural compliance, and operator awareness were evaluated for each of the following activities. Documents reviewed are listed in the Attachment.

- Core Reload Operations
- Mid-loop Operations
- Vessel Reassembly
- Mode Changes and TS compliance
- Low Power Physics Testing
- Power Ascension
- Problem Identification and Resolution Activities

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 test records for the following seven 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 licensee procedures FNP-0-AP-24, Test Control; FNP-0-M-050, Master List of Surveillance Requirements; and FNP-0-AP-16, and attended selected briefings to determine if procedure requirements were met.

Surveillance Tests
- FNP-2-STP-1.0, Operations Daily and Shift Surveillance Requirements
- FNP-1-STP-8.0, RCP Seal Injection Leakage Test
- FNP-1-STP-11.1, 1A RHR Pump Quarterly Inservice Test
- FNP-1-STP-4.1, 1A Charging Pump Quarterly Inservice Test

In-Service Tests
- FNP-2-STP-4.3, 2C Charging Pump Quarterly Inservice Test
- FNP-1-STP-23.3, 1C CCW Quarterly Inservice Test

Containment Isolation Valve Test
- FNP-2-STP-40.0, Safety Injection With Loss of Off-Site Power Test

b. Findings

No findings of significance were identified

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation

a. Inspection Scope

The inspectors observed an emergency plan drill on May 12 to verify the licensee's ability to properly classify the event, make required notifications, and give protective action recommendations. The inspectors also attended the drill self-assessment to assess the licensee's effectiveness in identifying areas of improvement. The drill included activation of the on-site technical support center (TSC) and the Emergency Operations Facility (EOF) in Birmingham, AL. The inspectors reviewed procedure FNP-0-EIP-15.0, Emergency Drills, to verify the licensee's response actions to the drill. The inspectors reviewed FNP-0-EIP-9.0 to validate the classification of the event made by the licensee. The inspectors subsequently observed and reviewed the notifications made, communications between members, team work of personnel, identification of weaknesses and deficiencies, corrective action documentation, management involvement, and overall performance.

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 performance indicators (PIs) listed below for the period from April 2003 through March 2004. PI definitions and the guidance contained in NEI 99-02, "Regulatory Assessment Indicator Guideline," Rev. 2, and licensee procedure FNP-0-AP-54, Preparation and Review of NRC Performance Indicator Data, were used to verify the accuracy of the data reported and to verify procedure and reporting requirements were met.

Mitigating Systems Cornerstone
- Unit 1 and Unit 2 Heat Removal System Unavailability
- Unit 1 and Unit 2 Emergency AC Power System Unavailability
- Unit 1 and Unit 2 Safety System Functional Failures

The inspectors reviewed a selection of licensee event reports (LERs), portions of Unit 1 and Unit 2 operator log entries, daily morning reports (including the CR descriptions), the monthly operating reports, and PI data sheets to determine whether the licensee adequately identified unavailable hours for the selected systems that occurred during the previous four quarters. 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.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems

1. Daily Condition Report Reviews

As required by Inspection Procedure 71152, Identification and Resolution of Problems, and in order to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's corrective action program. This review was accomplished by reviewing copies of each CR, attending daily screening meetings, and accessing the licensee's computerized database.

2. Annual Sample Review

a. Inspection Scope

The inspectors reviewed CR 2003000990 concerning a possible sticking discharge check valve for the 2B centrifugal charging pump. The CR stated that the pump discharge flow and mini-flow line flow was momentarily low when the pump was started indicating a possible sticking discharge check valve. The pump performance was checked and no pump degradation was found. The discharge check valve was disassembled during the spring refueling outage. No problems were found with the discharge check valve.

b. Findings and Observations

No findings of significance were identified. The CR was properly classified and the assigned corrective action completed. However, the cause of the sticking check valve was not identified nor was gas intrusion considered for the indications of momentary low flow when the pump was started. Several months later, gas was identified to be leaking into the 2B pump past the discharge check valve as stated in CR 2004002388. This was an example of not considering all possible potential causes of the identified problem.

3. Semi-Annual Trend Review.

a. Inspection Scope

As required by Inspection Procedure 71152, Identification and Resolution of Problems, the inspectors performed a review of the licensee's corrective action program (CAP) and associated documents to identify trends that could indicate the existence of a more safety significant safety issue. The inspector's review focused on CRs with corrective action that were not sufficiently comprehensive to reduce the likelihood or prevent recurrence of the condition. The review also considered the results of the daily inspector CAP item screening discussed in section 4OA2.1, licensee trending efforts, and licensee human performance results. The inspectors reviewed the licensee quarterly trend reports for November 2003 - January 2004 and February - April 2004, corrective action program performance indicators, daily CRs, selected completed CRs discussed in this section, root cause analyses, Maintenance Rule (a)1 list, equipment health reports, and quality assurance reports to identify trends. The inspectors compared and contrasted their results with the results contained in the licensee's quarterly trend reports. Corrective actions associated with a sample of the issues identified in the licensees trend report were reviewed for adequacy. The inspectors also evaluated the reports against the requirements of the licensee's CAP as specified in FNP-0-AP-30.0, Corrective Action Reporting, and 10 CFR 50, Appendix B.

b. Assessments and Observations

No findings of significance were identified. The inspectors identified a trend indicating that corrective action was not always sufficiently comprehensive to reduce the likelihood of recurrence or prevent recurrence. The licensee's CAP procedure requires that for Severity Level (SL) 2 CRs the corrective action prevent the likelihood of recurrence and for SL3 CRs reduce the likelihood of recurrence. The following are three examples where either the corrective actions did not fully address the issue, not correctly address the problem, or, in the case of SL 2 CRs, the corrective action was not sufficiently comprehensive to prevent recurrence. Similar items were identified in the both the inspector's and licensee's review. The first two examples were identified by the inspectors. The third example and items noted in the corrective action performance indicators were identified by the licensee.

- CR 2004000139, concerning a post maintenance test of a service water pump. The corrective action specified in the CR was only for the specific problem. The corrective action was not sufficiently broad to capture other tests where the same condition would likely recur. The licensee wrote CR 2004000783 to address this additional issue.

- CR 2003000990, concerning a possible sticking discharge check valve for the 2B centrifugal charging pump, did not consider all possible causes for momentary low flow when the charging pump was started. In its disposition, the licensee failed to consider gas intrusion as a possible cause of momentarily low flow when the pump was started. Gas intrusion was later determined to be a problem in the charging pump.

- CR 2004000824, concerning a reactor trip in March 2004. The CR stated the failed circuit card was scheduled for replacement but the schedule changed. The licensee stated in the CR that the corrective action for a previously identified problem was not adequate to prevent recurrence.

The licensee also noted in their corrective action performance indicators that two SL 2 CRs were written concerning repetitive problems. CR 2004001041 concerning the 2A MDAFW pump found the inboard bearing oil bubbler empty with oil on the floor, and CR 2004001281 concerning the 1A Containment Spray (CS) pump room cooler. In both cases, the corrective actions did not correct the problem. The 1A CS pump room cooler was determined to be a maintenance preventable functional failure.

Collectively, these examples indicated that in a number CRs, including some of the more significant CRs (level two), the corrective action was not comprehensive nor did the corrective action reduce or prevent the likelihood of recurrence of the condition. These represented missed opportunities for the CAP to correct the problem.

4OA3 Event Follow-up

1. Reactor Trip Followup

a. Inspection Scope

On April 11, Unit 2 tripped due to a logic failure unblocking the 'B' Train Source Range High Flux Trip allowing generation of a source range high flux reactor trip signal. The inspectors responded to this event to verify plant conditions were stable and all safety systems responded as expected. On April 12, Unit 2 tripped again for the same reason. The inspectors responded to this event. The inspectors reviewed troubleshooting activities, circuit card replacement and testing, and attended the plant review board meeting to review the readiness for restart. Additional information on the trips is discussed below with closure of the Licensee Event Report (LER) in this section.

b. Findings

No findings of significance were identified.

2. (Closed) LER 05000348/2004001-00, Reactor Trip Due to Steam Generator Feedwater Pump Speed Control Failure

On March 1, 2004, Unit 1 tripped due to the 1C steam generator (SG) reaching its high level setpoint. The high SG level resulted from the failure of a circuit card in the feedwater pump master speed control circuit causing a ramp increase in the speed of both feedwater pumps. Additional discussion of this trip is in Farley Inspection Report 04-02, sections 1R14 and 4OA3. The licensee has a program in place to address aging issues of the plant process control systems. This card had been identified for replacement but had not been replaced at the time of the failure. The licensee entered this event into their corrective action program under CR 200400824. The inspectors determined there was no performance deficiency and no violation of NRC requirements.

3. (Closed) LER 05000364/2004002-00, Plant Entered Mode 3 with One Train of Component Cooling Water Inoperable

On April 8, 2004, at 10:00 p.m. the licensee identified, during a tagging order review for going into Mode 3, that one train of CCW was inoperable and the associated TS Limiting Condition for Operation (LCO) had not been entered. On April 7, 2004, valve HV3096A, CCW from Evaporator Packages and H2 Recombiners, would not open from the main control board and was opened using its manual operator. Personnel did not recognize that placing this valve on the manual operator made the on-service train of CCW inoperable. This valve isolates the non-seismic portion of the CCW system from the safety-related portion and the valve would not have closed if required. This was contrary to TS 3.0.4 in that the unit entered Mode 4 on April 8, 2004 at 5:29 p.m. with one train of CCW inoperable. The regional Senior Reactor Analyst performed a Phase 3 screening analysis to determine the significance of the event. Due to the low initiating event frequency for an earthquake and the short exposure time, the event was screened

as very low safety significance (Green). The licensee entered this event into their corrective action program (CR 2004001672). No new findings of significance were identified by the inspectors. The enforcement aspects are discussed in Section 4OA7.

4. (Closed) LER 05000364/2004003-00, Technical Specification 3.0.4 Violation Due to Turbine Driven Auxiliary Feedwater Pump Inoperable

On April10, 2004, the licensee identified, during surveillance testing of the TDAFW pump, that Unit 2 was operated contrary to TS 3.0.4 in that the unit entered Mode 3 with one train of auxiliary feedwater (AFW) inoperable. The licensee determined that poor maintenance work practices had rendered the TDAFW pump inoperable due to a wiring error. To address this issue the licensee implemented corrective action which involved personnel being counseled on adhering to the requirements of the troubleshooting program, a Training Advisory Notice sent to Maintenance personnel informing them of the details of the event, in addition to incorporation of the event details in the maintenance continuing training program. The licensee entered the event into their corrective action program specified (CR2004001839). No new findings of significance were identified by the inspectors. The enforcement aspects are discussed in Section 4OA7.

5. (Closed) LER 05000364/2004004-00, Reactor Trips Due to Unblocking of Source Range Permissive Interlock

On April 11, 2004, during low power physics testing, a Unit 2 reactor trip occurred when a logic failure unblocked the B train source range high flux trip and allowed generation of a source range high flux reactor trip signal. The cause of the logic failure was determined to be a circuit card failure in the solid state protection system. Several cards were replaced and the system tested satisfactorily. However, again on April 12, 2004, the same trip occurred. The licensee conducted extensive troubleshooting and found an intermittent card failure that was sensitive to heat. The card was replaced and the unit restarted. Both of these trips were attributed to circuit card failures. There was not a performance deficiency and no violation of NRC requirements. Additional comments concerning comprehensive of corrective actions is discussed in Section 4OA2. The licensee entered these trips into their corrective actions program as CRs 2004001706 and 2004001709. The licensee has a program to address aging circuit cards. No new findings of significance were identified by the inspectors. The inspectors determined there was no performance deficiency and no violation of NRC requirements.

4OA5 Other Activities

1. (Discussed) Temporary Instruction (TI) 2515/156, Offsite Power System Operational Readiness

a. Inspection Scope

The inspectors collected data from licensee maintenance records, event reports, corrective action documents and procedures and through interviews of station engineering, maintenance, and operations staff, as required by the Temporary Instruction (TI) 2515/156. The data was gathered to assess the operational readiness of the offsite power systems in accordance with NRC requirements such as Appendix A to 10 CFR Part 50, General Design Criterion (GDC) 17; Criterion XVI of Appendix B to10 CFR Part 50, Plant Technical Specifications (TS) for offsite power systems; 10 CFR 50.63; 10 CFR 50.65 (a)(4), and licensee procedures. Documents reviewed are listed in the Attachment.

b. Findings

Based on the inspection, no immediate operability issues were identified. In accordance with TI 2515/156 reporting requirements, the inspectors provided the required data in the work sheets provided with the TI to the headquarters staff for further analysis. This TI will remain open pending completion of that analysis.

2. Third Party Reviews

The inspectors reviewed the Institute of Nuclear Power Operations report for the October, 2003 evaluation. There were no significant safety issues documented that were not known by the NRC.

4OA6 Meetings, Including Exit

On July 2, 2004, the inspectors presented the inspection results to Mr. Don Grissette and the other members of his staff who acknowledged the findings. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

4OA7 Licensee-Identified Violations

The following violations of very low safety significance (Green) were identified by the licensee and are violations of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as NCVs.

- TS 3.0.4 states when an LCO is not met entry into a Mode or other specified condition in the TS Applicability shall not be made. Contrary to this on April 8, 2004, Unit 2 entered Mode 4 with an LCO on one train of CCW. CCW was inoperable due to valve HV-3096A being unable to isolate the non-seismic portion of the system from the

safety related portion. This was identified in the licensee's corrective action program as CR 2004001672. This finding is of very low safety significance due to the low initiating event frequency of an earthquake and the short exposure time.

- TS 3.0.4 states when an LCO is not met entry into a Mode or other specified condition in the TS Applicability shall not be made. Contrary to this on April 9 to 10, 2004, Unit 2 entered Mode 3 with the TDAFW pump train of AFW inoperable. This was identified in the licensee's corrective action program as CR 2004001839. This finding is of very low safety significance because the other two AFW trains were available and the minimal exposure time of the LCO.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

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

NRC personnel
L. Wert, Deputy Division Director, Division of Reactor Projects
B. Bonser, Chief, Reactor Projects, Branch 2

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Closed

50-348/2004-001-00	LER	Reactor Trip Due to Steam Generator Feedwater Pump Speed Control Failure (Section 4OA3)
50-364/2004-002-00	LER	Plant Entered Mode 3 with One Train of Component Cooling Water Inoperable (Section 4OA3)
50-364/2004-003-00	LER	Technical Specification 3.0.4 Violation Due to Turbine Driven Auxiliary Feedwater Pump Inoperable (Section 4OA3)
50-364/2004-004-00	LER	Reactor Trips Due to Unblocking of Source Range Permissive Interlock (Section 4OA3)

Discussed

2515/156	TI	Offsite Power System Operational Readiness (Section 4OA5)

Attachment

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection
FNP-0-SOP-56.0, Control Room HVAC System
FNP-1-STP-17.0, Containment Cooling System Train A Operability Test
WO3001321 for repair and return to service or SW "A" train traveling screens
FNP-1-STP-17.0, Containment Cooling System Train B Operability Test

Section 1R06: Flood Protection Measures
FNP-2-STP-215.7, Surveillance Test Package for Flooding Detectors
Instrumentation Setpoint Index, B175968
CR 2004100779

Section 1R11: Licensed Operator Requalification
FNP-1-ECP-3.1, SGTR with Loss of Reactor Coolant Subcooled Recovery Required
FNP-1-ESP-3.1, Post SGTR Cooldown Using Backfill
FNP-1-AOP-1.0, RCS Leakage
FNP-1-ARP-1.2, Main Control Board Annunciator Panel B

Section 1R14: Personnel Performance During Non-Routine Plant Evolutions
CRs: 2004001831, 2004001777, 2004001706, 2004001709
FNP -2-UOP-1.2, Startup of Unit from Hot standby to Minimum Load
FNP-0-ACP-16.1, Reactor Trip/Transient Analysis Summary
FNP-2-IMP-259.7, Testing Spurious N32 Unblocking
FNP-2-STP-33.0B, Solid State Protection System Train B Operability Test

Section 1R20: Refueling and Outage Activities
FNP-2-UOP-4.1, Controlling Procedure for Refueling
FNP-2-UOP-4.3, Mid-loop Operations

Section 1R22: Surveillance Testing
Drawing D-175038-2, Safety Injection System
Drawing D-175041-2, CVCS

Section 4OA5: Other
TI 2515/156
FNP 1,2-AOP-5.2, Degraded Grid
FNP-0-ACP-52.1, Guidelines for Scheduling On-line Maintenance
FNP-0-ACP-4.0, Switchyard Activities
FNP-0-M-87, Maintenance Rule Scoping Manual
A-173444, Power Quality Guide
FNP-0-ACP-16.1, Reactor Trip/Transient Analysis Summary
FNP-1,2-STP-27.1, A.C. Source Verification
FNP-0-SOP-0.3 Appendix J, Obtaining circuit Breaker and Disconnect Positions and Line Voltages and Amps Locally
North American Electric Reliability Council readiness audit dated May 26, 2004
LER 50-348/2000-05