



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-8931

April 28, 2006

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

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT - NRC INTEGRATED INSPECTION
REPORT 05000348/2006002 AND 05000364/2006002

Dear Mr. Stinson:

On March 31, 2006, 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 April 6, 2006, with Mr. Randy Johnson 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, one NRC-identified finding of very low safety significance was identified and determined to be a violation of NRC requirements. Because this violation is of very low safety significance and was entered into your corrective action program, the NRC is treating this violation as a non-cited violation (NCV) consistent with Section VI.A of the NRC Enforcement Policy. If you contest this NCV, 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

SNC

2

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/

Scott M. Shaeffer, Acting Chief
Reactor Projects Branch 2
Division of Reactor Projects

Docket Nos. 50-348, 50-364, and 72-42
License Nos. NPF-2 and NPF-8

Enclosure: Inspection Report 05000348/2006002 and
05000364/2006002
w/Attachment: Supplemental Information

cc w/encl: (See page 3)

SNC

2

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/

Scott M. Shaeffer, Acting Chief
Reactor Projects Branch 2
Division of Reactor Projects

Docket Nos. 50-348, 50-364, and 72-42
License Nos. NPF-2 and NPF-8

Enclosure: Inspection Report 05000348/2006002 and
05000364/2006002
w/Attachment: Supplemental Information

cc w/encl: (See page 3)

PUBLICLY AVAILABLE NON-PUBLICLY AVAILABLE SENSITIVE NON-SENSITIVE
ADAMS: Yes ACCESSION NUMBER: _____

OFFICE	RII:DRP	RII:DRP	RII:DRS	RII:DRS	RII:DRS	RII:DRS	RII:DRS
SIGNATURE	CAP	JBB	RCT				
NAME	CPatterson	JBaptist	RTaylor				
DATE	4/28/2006	4/27/2006	4/27/2006				
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO
OFFICE	RII:DRS	RII:DRS	RII:DRS				
SIGNATURE							
NAME							
DATE							
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

cc w/encl:

B. D. McKinney, Licensing Services
Manager, B-031
Southern Nuclear Operating Company, Inc.
Electronic Mail Distribution

J. R. Johnson
General Manager, Farley Plant
Southern Nuclear Operating Company, Inc.
Electronic Mail Distribution

J. T. Gasser
Executive Vice President
Southern Nuclear Operating Company, Inc.
Electronic Mail Distribution

Bentina C. Terry
Southern Nuclear Operating Company, Inc.
Bin B-022
P. O. Box 1295
Birmingham, AL 35201-1295

State Health Officer
Alabama Department of Public Health
RSA Tower - Administration
201 Monroe St., Suite 700
P. O. Box 303017
Montgomery, AL 36130-3017

M. Stanford Blanton
Balch and Bingham Law Firm
P. O. Box 306
1710 Sixth Avenue North
Birmingham, AL 35201

William D. Oldfield
Quality Assurance Supervisor
Southern Nuclear Operating Company
Electronic Mail Distribution

Distribution (See page 4)

Report to L. M. Stinson of Southern Nuclear Operating Company, Inc. dated April 28, 2006

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT - NRC INTEGRATED INSPECTION REPORT
05000348/2006002 AND 05000364/2006002

Distribution w/encl:

R. Martin, NRR

C. Evans (Part 72 Only)

L. Slack, RII EICS

RIDSNRRDIPMLIPB

PUBLIC

U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 50-348, 50-364, 72-42

License Nos.: NPF-2, NPF-8

Report Nos.: 05000348/2006002 and 05000364/2006002

Licensee: Southern Nuclear Operating Company, Inc.

Facility: Joseph M. Farley Nuclear Plant

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

Dates: January 1- March 31, 2006

Inspectors: C. Patterson, Senior (Sr.) Resident Inspector
J. Baptist, Resident Inspector
R. Taylor, Reactor Inspector

Approved by: Scott M Shaeffer, Acting Chief
Reactor Projects Branch 2
Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000348/2006002 and 05000364/2006002; 01/01/2006-03/31/2006; Joseph M. Farley Nuclear Plant, Units 1 & 2.

The report covered a three-month period of inspection by the resident inspectors and a regional reactor inspector. One Green non-cited violation was identified. The significance of most findings is indicated by its 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

Cornerstone: Mitigating Systems

CA Green, NRC-identified, non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XIV, Corrective Actions, was identified for failure to promptly identify and correct a failure of the 1F (Unit 1 Train A Engineered Safety Feature) 4-kV bus synchroscope resulting in the unrecognized inoperability of the 1-2A Emergency Diesel Generator (EDG) set.

This finding is more than minor because it is associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and because it affects the associated cornerstone objective. Specifically, the Mitigating System Cornerstone objective is to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences in the future. This finding is of very low safety significance (Green) because there was no complete loss of system safety function and no direct effect on initial accident response or system mission time. This finding involved the cross-cutting aspect of Identification within the area of Problem Identification and Resolution due to cognitive personnel error and knowledge deficiency, in that, it was unclear to the operating crew that loss of the voltmeter indicated that the synchroscope might also be inoperable.

B. Licensee-Identified Violations

None

Enclosure

REPORT DETAILS

Summary of Plant Status

Unit 1 operated at or near rated thermal power (RTP) until March 1, 2006 when power was reduced to 20 percent to add oil to the 1C Reactor Coolant Pump (RCP). The unit returned to full power on March 4, 2006.

Unit 2 operated at or near RTP during the entire report period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R04 Equipment Alignment

a. Inspection Scope

Partial System Walkdowns. The inspectors performed partial walkdowns of the following three systems to verify they were properly aligned when redundant systems or trains were out of service. The walkdowns 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. Walkdown preparations included reviewing the Updated Final Safety Analysis Report (UFSAR), plant procedures and drawings, checks of control room and plant valves, switches, components, electrical power line-ups, support equipment, and instrumentation.

C The 1-2A Emergency Diesel Generator (EDG) while the 1B EDG was having maintenance performed

C The 1A Containment Spray (CS) pump train during a 1B CS pump equipment outage

C The 1A Residual Heat Removal (RHR) pump during 2A RHR pump equipment outage

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

Fire Area Tours The inspectors conducted walkdowns of the ten fire areas listed 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 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.

C Unit 1 Auxiliary Building 121' 4160-V Train B Switchgear Room Area, Fire Zone 21

Enclosure

C Unit 1 Auxiliary Building 121' Control Rod Drive Mechanism (CRDM) Control System Cabinet Room, Fire Zone 23
 C Unit 1 Auxiliary Building 121' 4160-V Load Center Cooling Unit Corridor, Fire Zone 20
 C Unit 1 Auxiliary Building 139' 4160-V Train A Switchgear Room Area, Fire Zone 41
 C Unit 1 Auxiliary Building 139' Load Center 1D A/C Unit Corridor, Fire Zone 42
 C Unit 2 Auxiliary Building 121' 4160-V Train B Switchgear Room Area, Fire Zone 21
 C Unit 2 Auxiliary Building 121' CRDM Control System Cabinet Room, Fire Zone 23
 C Unit 2 Auxiliary Building 121' 4160-V Load Center Cooling Unit Corridor, Fire Zone 20
 C Unit 2 Auxiliary Building 139' 4160-V Train A Switchgear Room Area, Fire Zone 41
 C Unit 2 Auxiliary Building 139' Load Center 2D A/C Unit Corridor, Fire Zone 42

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance

Biennial Inspection

a. Inspection Scope

The inspectors reviewed inspection records, test results, maintenance work orders, and other documentation to ensure that heat exchanger (HX) deficiencies that could mask or degrade performance were identified and corrected. Risk significant heat exchangers reviewed included the Component Cooling Water (CCW) HXs along with the EDG jacket water HXs.

The inspectors reviewed completed HX inspection and cleaning procedures, inspection frequency, and tube plugging maps. In addition, the inspectors reviewed eddy current test reports for the selected HXs. The inspectors reviewed these documents of selected HXs to determine if the heat exchanger test methodology was consistent with licensee commitments with respect to NRC Generic Letter 89-13, Service Water System Problems Affecting Safety-Related Equipment commitments; test conditions were appropriately considered; test or inspection criteria were appropriate and met the acceptance criteria; the test frequency was appropriate; as-found conditions were appropriately dispositioned such that the final condition was acceptable; and test results considered test instrument inaccuracies and differences.

The inspectors also reviewed the overall condition of the Service Water (SW) system via review of design basis documents, system health reports, and discussions with the SW system engineer. These documents were reviewed to verify that the design basis was being maintained and to verify adequate SW system performance under current preventive maintenance, inspections and frequencies. The inspectors also walked down the SW intake structure and observed a chemical treatment to the SW back up to auxiliary feedwater.

Condition Evaluation Reports (CERs) were reviewed for potential common cause problems and problems which could affect system performance to confirm that the licensee was entering problems into the corrective action program and initiating appropriate corrective actions. In

addition, the inspectors conducted a walkdown of selected HXs and major components for the SW system to assess general material condition and to identify any degraded conditions.

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 a loss of feedwater, loss of heat sink, loss of core cooling, and failure to trip. The inspectors observed high-risk operator actions, overall performance, self-critiques, training feedback, and management oversight to verify that 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 two issues to verify implementation of licensee procedures FNP-0-87, Maintenance Rule (MR) Scoping Manual; NMP-ES-021, Structural Monitoring Program for the Maintenance Rule; FNP-0-89, FNP Maintenance Rule Site Implementation Manual; and compliance with 10CFR50.65. 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 MR coordinator, and operations personnel to assess their knowledge of the program.

C Condition Report (CR) 2006101422, Nuclear Instrumentation System Source Range Failures
C CR 2006100937, Unit 1 Radiation Monitoring Detector R-19 Corrective Actions

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors assessed the licensee's planning and control for the five listed planned activities to verify that the requirements in licensee procedures FNP-0-ACP-52.3, Guidelines for Scheduling of On-Line Maintenance; NMP-GM-006, Work Management; and FNP-0-AP-16, Conduct of Operations - Operations Group; and the MR risk assessment guidance in 10CFR50.65a(4) were met.

C Risk Evaluation associated with 1A CS Pump Outage on January 27, 2006
 C CR 2006100908, Service Water (SW) Structure Fire Main Clapper Actuation Flooding
 CCR 2005112444, 2A Motor-Driven Auxiliary Feedwater (MDAFW) Inadvertent Start
 CCR 2006101709, 1C EDG Remote Shutdown Electronic Governor Troubleshooting
 C CR 2006102210, Unit 1 Solid State Protection System (SSPS) Testing Postponed Due to Exciter Cooler Leakage

b. Findings

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

a. Inspection Scope

The inspectors reviewed one Unit 1 event. On March 1, 2006, the inspectors observed a Unit 1 planned down-power to resolve an issue with the 1C RCP Lower Motor Oil Reservoir Level Low indication. The unit was reduced to 20 percent reactor power to accommodate containment entry and associated maintenance activities to investigate the oil loss and refill the respective oil reservoir. The plant was restored to 100 percent reactor power on March 4, 2006, after appropriate repairs were completed. For a non-routine plant event, the inspectors assessed the licensee's use of operating procedures, annunciator procedures, abnormal operating procedures, control room actions, command and control, management involvement, training expectations, previous CRs, maintenance work history, and communication. The inspectors reviewed operator logs, plant computer data, control room strip charts, and discussed actions with operations personnel. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the five listed operability evaluations to verify they met the requirements of licensee procedures FNP-0-AP-16, Conduct of Operations and

FNP-0-ACP-9.2, Operability Determination, 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 (FSDs) to verify that system operability was not affected.

C CR 2006101160, 2D SW Pump Failure to Start
 C CR 2006100068, 1C EDG Governor Speed Setter Found in Wrong Position
 C CR 2005113029, 2A Coolant Charging Pump Gas Accumulation Issue
 C CR 2005112444, 2A MDAFW Pump Inadvertent Start
 C CR 2006101974, PT485 2B Steam Generator Pressure Erratic Indication

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-PMT-0.0, Post-Maintenance Test Program, to verify that post-maintenance test procedures and test activities for the following five systems/components were adequate to assure system operability and functional capability.

C FNP-2-STP-22.2, 2B AFW Pump Quarterly Inservice Test
 C FNP-1-STP-16.1, 1A Containment Spray Pump Quarterly Inservice Test
 C FNP-2-STP-4.2, 2B Coolant Charging Pump Quarterly Inservice Test
 C FNP-2-STP-24.2, 2D SW Pump Quarterly Inservice Test
 C FNP-1-STP-80.23, EDG 1C Remote Shutdown Capability Test

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 six listed surveillance tests to determine if the tests 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—050, Master List of Surveillance Requirements; and FNP-0-AP-16, Conduct of Operations, and attended selected briefings to determine if procedure requirements were met.

Surveillance Tests

C FNP-2-STP-4440, Steam Generator Water Level Control Test

C FNP-1-STP-114.1, Moderator Temperature Coefficient Determination for C_B # 300ppm

C FNP-1-STP-16.12A, 1A CS Pump Automatic Starting Circuitry Test

C FNP-1-STP-33.2B, Reactor Trip Breaker Train B Operability Test

In-Service Tests (ISTs)

C FNP-1-STP-11.1, 1A RHR Pump Quarterly Inservice Test

Reactor Coolant System (RCS) Leak Detection

C FNP-1-STP-9.0, RCS Leakage

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES4OA1 Performance Indicator Verificationa. Inspection Scope

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

Mitigating Systems Cornerstone

- Unplanned Scrams
- Scrams with Loss of Normal Heat Removal
- Unplanned Power Changes

The inspectors reviewed samples of raw PI data, Licensee Event Reports (LERs), and Monthly Operating Reports for the period covering January 2004 through December 2005. The data reviewed from the LERs and Monthly Operating Reports was compared to graphical representations from the most recent PI report. The inspectors also examined a sampling of operations logs and procedures to verify that the PI data was appropriately captured for inclusion into the PI report as well as ensuring that the individual PIs were calculated correctly. The inspectors identified an omission of data for Unit 2 Unplanned Power Changes in the second quarter of 2004. This would have changed the indicated value from this quarter until the second quarter of 2005, but would not have caused the PI to cross the White threshold. The error was addressed by the licensee in CR 2006102114.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems

.1 Daily Review

As required by Inspection Procedure 71152, Identification and Resolution of Problems, and 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 daily hard copy summaries of CRs and by reviewing the licensee's electronic CR database.

.2 Annual Sample Review

a. Inspection Scope

As required by Inspection Procedure 71152, Identification and Resolution of Problems, the inspectors performed a detailed review of the history of problems with CR 2006100068 concerning the improper placement of the 1C EDG Governor Speed setting. The CR was examined to verify that safety concerns were properly classified and prioritized for resolution; technical issues were evaluated and dispositioned to address operability and reportability; apparent cause determinations were sufficiently thorough; extent of condition, generic implications, common causes, and previous history were adequately considered; and appropriate corrective actions (short- and long-term) were implemented or planned in a manner consistent with safety and compliance. The inspectors also evaluated the CR against the requirements of the licensee's corrective action program as delineated in Procedure NMP-GM-003, Corrective Action Program, and 10 CFR 50, Appendix B.

b. Findings and Observations

No findings of significance were identified. During Job Performance Measures (JPM) training on January 4, 2006, the crew observed that the speed setting on the 1C Diesel governor appeared to be 18.9 versus the required setting of 19.9. The setting was confirmed to be incorrect and was reset to the correct value of 19.9. The shift determined that the most probable cause of the incorrect setting was an error made during the previous slow-speed start performed on December 26, 2005. Based on interviews with personnel involved and a review of the events, the licensee concluded that an error had been made during the December 26, 2005, run because the speed control knob was adjusted to 18.9 when the procedure directed it to be set at 19.9. Another error was made at that time when the designated Independent Verifier failed to recognize the incorrect setting.

The crew discovering the condition determined that the diesel had successfully passed the monthly surveillance with the setting at 18.9, but were unsure what affect the setting had on the 2000-hour rating of the diesel. They declared the EDG inoperable and took necessary actions per the limiting condition for operation (LCO). With the mechanical governor set at 18.9, the engine would have sped up to approximately 916 RPM (the speed equivalent to 18.9) if the electrical governor failed for any reason. However, on an isochronous start, such as an loss of offsite power (LOSP), or a normal manual start, the electrical governor would control speed at 60 Hz. A mechanical governor setting of 18.9 would limit neither the ability of the engine to run

at 60 Hz nor the fuel rack movement in any way so that power would be limited. Therefore, the crew concluded that there were no adverse effects on the ability of the diesel to perform its safety-related function, including producing the 2000-hour rating power. The diesel was not inoperable because of the incorrect setting on the governor. Based on a review of the CR, discussions with engineers and plant management, and information exchanged during licensee meetings, the inspectors concluded the licensee's assessment of the identified problem and the subsequent corrective actions were thorough and appropriate.

4OA3 Event Followup

.1 (Closed) Licensee Event Report (LER) 05000348/2005-002-00, Technical Specification 3.8.1 Violation Due to 1F Bus Synchroscope Failure

a. Inspection Scope

The inspectors reviewed the Unit 1 LER and CR 2005111594 documenting the 1F bus synchroscope failure and subsequent inoperability of the 1-2A DG set that occurred on November 11, 2005. The impact of the synchroscope failure was not initially recognized and resulted in the 1-2A EDG being inoperable and, therefore, the Technical Specification-required actions for an inoperable EDG were not performed. The inspectors reviewed the root cause of the issue, TS and LCO applicability, relevant control room indications, and troubleshooting results.

b. Findings

Introduction. A Green, NRC identified non-cited violation (NCV) was identified for failure to promptly identify and correct a failure of the 1F (Unit 1 Train A Engineered Safety Features) 4-kV bus [EK] synchroscope resulting in the unrecognized inoperability of the 1-2A Emergency Diesel Generator (EDG) set.

Description. On November 11, 2005 at 1149, operators were taking routine bus voltage readings. When the 1F voltmeter selector switch was operated, the voltmeter went blank. A supplemental indication that an abnormal condition existed was the de-energized status of a white light on the Emergency Power Panel. This light was identified to be off at the same time the voltmeter lost power; however, no personnel were aware that this light indicated power available to the applicable synchroscope. The licensee did determine that an LCO existed with respect to TS Table 3.3.5-1 Function 3 for loss of 4-kV bus degraded grid alarm capability, and the Required Action for this condition was met. It was not recognized at that time that the synchroscope for the 1F 4-kV bus was also affected. During troubleshooting of the voltmeter on November 14, 2005 it was determined that the voltmeter was failed due to blown fuses, and that the blown fuses also disabled the synchroscope. The synchroscope is required per TS Surveillance Requirement (SR) 3.8.14 for the ability to synchronize the 1-2A Train A Emergency Diesel Generator (EDG) to an offsite source following power restoration after an LOSP. Upon recognition that the de-energized status light resulted in inoperability of the EDG, the 1-2A EDG was subsequently declared inoperable for Unit 1 only, per TS 3.8.1 on November 14, 2005 at 1647. The fuses were replaced, restoring power to the voltmeter and the synchroscope. The 1-2A EDG was declared operable on November 14, 2005, at 2200. This

finding involved the cross-cutting aspect of Identification within the area of Problem Identification and Resolution due to cognitive personnel error and knowledge deficiency, in that, it was unclear to the operating crew that loss of the voltmeter indicated that the synchroscope might also be inoperable.

Analysis. The finding is greater than minor because it is associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and because it affects the associated cornerstone objective. Specifically, the Mitigating System Cornerstone objective is to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences in the future. The failure resulted in the unrecognized inoperability of the EDG for an approximate 3-day period. This finding is of very low safety significance (Green) because there was no complete loss of system safety function and no direct effect on initial accident response or system mission time.

Enforcement. 10CFR50 Appendix B Criterion XIV, Corrective Action, requires that measures be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material, and equipment and nonconformances are promptly identified and corrected. Contrary to the above, the impact of the 1F 4-kV bus synchroscope malfunction was not identified for 77 hours and repairs were not completed to restore the 1-2A EDG to operable status until 82 hours from the initiating event. Because this failure to follow TS is of very low safety significance and has been entered into the licensee's corrective action program (CR 2005111594), this violation is being treated as an NCV, consistent with Section VI.A of the NRC Enforcement Policy; NCV 05000348/2006-002-01, Failure to Promptly Identify and Correct Conditions Resulting in the Unrecognized Inoperability of the 1-2A Emergency Diesel Generator.

40A5 Other Activities

Review of Institute of Nuclear Power Operations (INPO) Evaluation Report

The inspectors reviewed the results of an INPO evaluation of licensee performance conducted during August 2005. The report did not identify any significant licensee performance issues that had not been previously addressed and/or reviewed by the NRC.

40A6 Meetings, Including Exit

1. Exit Meeting Summary

On April 6, 2006, the inspectors presented the inspection results to Mr. Randy Johnson 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.

2. Annual Assessment Meeting Summary

On April 18, the NRC's Senior Resident Inspector assigned to the Farley Nuclear Plant (FNP) met with Southern Nuclear Operating Company to discuss the NRC's Reactor Oversight Process (ROP) and the NRC's annual assessment of FNP safety performance for the period of

January 1, 2005 - December 31, 2005. The major topics addressed were: the NRC's assessment program and the results of the FNP assessment. A listing of meeting attendees and information presented during the meeting are available from the NRC's document system (ADAMS) as accession number ML061140063. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

W. L. Bargeron, Assistant General Manager - Operations
W. R. Bayne, Performance Analysis Supervisor
S. H. Chestnut, Engineering Support Manager
P. Harlos, Health Physics Manager
L. Hogg, Security Manager
J. Horn, Training and Emergency Preparedness Manager
J. R. Johnson, Plant General Manager
T. Livingston, Chemistry Manager
B. L. Moore, Maintenance Manager
W. D. Oldfield, Quality Assurance Supervisor
J. Swartzwelder, Work Control Superintendent
R. J. Vanderbye, Emergency Preparedness Coordinator
R. Wells, Operations Manager
T. L. Youngblood, Assistant General Manager - Plant Support

NRC personnel

L. Plisco, Deputy Regional Administrator, Region II
J. Shea, Deputy Division Director, Division of Reactor Projects

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Closed

05000348/2005-002-00 LER Technical Specification 3.8.1 Violation Due to 1F Bus
Synchroscope Failure (Section 4OA3)

Opened and Closed

05000348/2006-002-01 NCV Failure to Promptly Identify and Correct Conditions Resulting in
the Unrecognized Inoperability of the 1-2A Emergency Diesel
Generator (Section 4OA3)

LIST OF DOCUMENTS REVIEWED

Section 1R07: Heat Sink Performance

1-SOP-24.0, Service Water System, Rev. 55.0
2-SOP-22.0, Flushing SW and CST to the TDAFW Pump Piping, Rev. 51
0-ETP-4367, Performance Test For Units 1&2 DG Jacket Water Heat Exchangers, Rev. 9
RER FS040635401, Service Water RT/UT Inspections
C051715801, Service Water Flow Balance Test Preliminary Results, Rev. 0
OPS-52102F, Service Water Training Manual
Tube Plugging Reports for Unit 1 CCW Heat Exchangers, January 06
Preliminary FERC Service Water Pond Dam Inspection Results, August 2005

D-200013, River Water, Service Water, and Circulating Water Systems, Rev. 7

Section 1R11: Licensed Operator Requalification

AOP-13.0, Loss of Main Feedwater

SACRG-1, Severe Accidental Control Room Guideline Initial Response

FNP-1-FRP-C.1, Response To Inadequate Core Cooling

FNP-1-FRP-4.1, Response to Loss of Secondary Heat Sink

FNP-1-FRP-S.1, Response to Nuclear Power Generation-Anticipated Transient without Trip (ATWT)

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

FNP-1-STP-109.1, Power Range Neutron Flux Channel Calibration Using the Plant Computer

FNP-1-UOP-3.1, Power Operation

FNP-1-SOP-2.5, RCS Chemical Addition, Volume Control Tank (VCT) Gas Control and Demineralizer Operation

FNP-1-STP-34.1, Containment Inspection (Post-Maintenance)

FNP-0-SOP-1.8, Filling RCP-Bearing Oil Reservoirs