



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
SAM NUNN ATLANTA FEDERAL CENTER  
61 FORSYTH STREET, SW, SUITE 23T85  
ATLANTA, GEORGIA 30303-8931

July 30, 2008

Mr. J. Randy Johnson  
Vice President  
Southern Nuclear Operating Company, Inc.  
P.O. Box 1295  
Birmingham, AL 35201-1295

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT - NRC INTEGRATED INSPECTION  
REPORT 05000348/2008003, 05000364/2008003, AND 072000042/2008001  
AND PUBLIC MEETING SUMMARY

Dear Mr. Johnson:

On June 30, 2008, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Joseph M. Farley Nuclear Plant, Units 1 and 2. The enclosed inspection report documents the inspection results, which were discussed on July 3, 2008, with Ms. Cheri Collins 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 NRC reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, no findings of significance were identified. However, licensee-identified violations, which were determined to be of very low safety significance, are listed in this report. The NRC is treating these violations as non-cited violations (NCVs) consistent with Section VI.A.1 of the NRC Enforcement Policy because of the very low safety significance of the violations and because they are entered into your corrective action program. If you contest any NCV in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the 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 Joseph M. Farley Nuclear Plant.

SNC

2

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, if any, will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

*/RA/*

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

Docket No.: 50-348, 50-364, 72-42  
License No.: NPF-2, NPF-8

Enclosure: Inspection Report 05000348/2008-003 05000364/2008-003 and  
072000042/2008001 w/Attachment: Supplemental Information

cc w/encl.: (See page 3)

SNC

2

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, if any, will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

*/RA/*

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

Docket No.: 50-348, 50-364, 72-42  
License No.: NPF-2, NPF-8

Enclosure: Inspection Report 05000348/2008-003 05000364/2008-003 and  
072000042/2008001 w/Attachment: Supplemental Information

cc w/encl.: (See page 3)

X PUBLICLY AVAILABLE       NON-PUBLICLY AVAILABLE       SENSITIVE      X NON-SENSITIVE  
ADAMS:  Yes      ACCESSION NUMBER: \_\_\_\_\_      X SUNSI REVIEW COMPLETE */SMS/*

OFFICE	RII:DRP	RII:DRP	RII:DRP	RII:DRS	RII:DRS	RII:DRS	
SIGNATURE	CWR /RA/	ELC /via email/	SRS /via email/	SPA /via email/	RM /via email/	ADN /RA/	
NAME	CRapp	ECrowe	SSandal	SAtwater	RMoore	ANielsen	
DATE			07/29/2008		07/28/2008	07/31/2008	
E-MAIL COPY?	YES      NO	YES      NO	YES      NO	YES      NO	YES      NO	YES      NO	YES      NO

OFFICIAL RECORD COPY      DOCUMENT NAME: I:\RPB2\FARLEY\REPORTS\08-03\2008-003 IIR.DOC

SNC

3

cc w/encl:  
B. D. McKinney  
Licensing Services Manager  
B-031  
Southern Nuclear Operating Company, Inc.  
Electronic Mail Distribution

Jim Sommerville  
(Acting) Chief  
Environmental Protection Division  
Department of Natural Resources  
Electronic Mail Distribution

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

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

L. Mike Stinson  
Vice President  
Fleet Operations Support  
Southern Nuclear Operating Company, Inc.  
Electronic Mail Distribution

David H. Jones  
Vice President  
Engineering  
Southern Nuclear Operating Company, Inc.  
Electronic Mail Distribution

Moanica Caston  
Vice President and General Counsel  
Southern Nuclear Operating Company, Inc.  
Electronic Mail Distribution

M. Stanford Blanton, Esq.  
Balch and Bingham Law Firm  
Electronic Mail Distribution

Dr. D. E. Williamson  
State Health Officer  
Alabama Dept. of Public Health  
Electronic Mail Distribution

Mr. Mark Culver  
Chairman  
Houston County Commission  
P. O. Box 6406  
Dothan, AL 36302

SNC

4

Letter to J. Randy Johnson from Scott M. Shaeffer dated July 30, 2008

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT - NRC INTEGRATED INSPECTION  
REPORT 05000348/2008003, 05000364/2008003, AND 072000042/2008001  
AND PUBLIC MEETING SUMMARY

Distribution w/encl:

C. Evans, RII

L. Slack, RII

OE Mail

RIDSNRRDIRS

PUBLIC

R. Jervey, NRR

**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION II**

Docket Nos.: 05000348, 05000364, 072000042

License Nos.: NPF-2, NPF-8

Report No.: 05000348/2008003, 05000364/2008003, and  
072000042/2008001

Licensee: Southern Nuclear Operating Company, Inc.

Facility: Joseph M. Farley Nuclear Plant, Units 1 and 2

Location: Columbia, AL

Dates: April 1, 2008 through June 30, 2008

Inspectors: E. Crowe, Senior Resident Inspector  
S. Sandal, Resident Inspector  
S. Atwater, Senior Project Engineer (Section 4OA5.2)  
R. Moore, Senior Reactor Inspector (Section 4OA5.1)  
A. Nielsen, Senior Reactor Inspector (Section 2OS1)

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

Enclosure

## SUMMARY OF FINDINGS

IR 05000348/2008-003, 05000364/2008-003 and 072000042/2008001; 04/01/2008 – 06/30/2008; Joseph M. Farley Nuclear Plant, Units 1 and 2; Routine Integrated Report

The report covered a three-month period of inspection by the resident inspectors, two reactor inspectors and one health physicist. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, Reactor Oversight Process (ROP), Revision 4, dated December 2006.

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 NRC. Corrective actions taken or planned by the licensee have been entered into the licensee's CAP. These violations and corrective action tracking numbers 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 inspection period.

Unit 2 operated at or near 100 percent RTP until April 14, when reactor power was reduced to 61 percent due to a trip of the 2B main feedwater pump. Unit 2 returned to 100 percent RTP on April 17 and remained at this power level during the remainder of the inspection period.

1. REACTOR SAFETY  
Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

#### 1R01 Adverse Weather Protection

##### a. Inspection Scope

External Flooding. The inspectors reviewed the licensee's Updated Final Safety Analysis Report (UFSAR) and flooding analysis documents to identify those areas that can be affected by external flooding, including water intake facilities. The inspectors walked down accessible areas of the plant site to verify adequacy of watertight doors, common drain systems, and the sealing of equipment below the flood line. The inspectors performed visual inspections of cable and valve boxes to verify they were adequately sealed and not subject to submergence. The inspectors also reviewed licensee work orders to verify these cable and valve boxes were periodically inspected and water was removed to prevent submergence. Documents reviewed are listed in the Attachment.

Grid Reliability. The inspectors reviewed the licensee's station procedures to verify communication protocols exist between the transmission operator and the control room to promptly identify issues that could impact the offsite power system. The inspectors verified the adequacy of these procedures to address measures to monitor and maintain availability and reliability of both the offsite alternating current (AC) power system and the onsite alternate AC power system. The inspectors also reviewed the compensatory actions identified in station procedures to be performed when it is not possible to predict post-trip voltage at the site for current electrical grid conditions. Documents reviewed are listed in the Attachment.

##### b. Findings

No findings of significance were identified.

#### 1R04 Equipment Alignment

##### a. Inspection Scope

Partial System Walkdowns. The inspectors performed partial walk-downs of the following five systems to verify the operability of redundant or diverse trains and

Enclosure

components when safety equipment was inoperable. The inspectors attempted to identify discrepancies impacting the function of the system, and, therefore, potentially increasing risk. 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 UFSAR, plant procedures and drawings, checks of control room and plant valves, switches, components, electrical power, support equipment, and instrumentation. Documents reviewed are listed in the Attachment.

- Unit 1 'A' Train Auxiliary Feedwater (AFW) with 1B Motor-Driven AFW pump outage
- Unit 1 and Unit 2 Safety Related 4160 volt electrical buses during 24 month overhaul of 2C Emergency Diesel Generator (EDG)
- Unit 2 'A' Train Service Water (SW) Cooling with 1-2L load center equipment outage
- Unit 2 'A' Train EDGs 1-2A and 1C during planned maintenance on 2B EDG
- Unit 2 'A' Train Auxiliary Building Safety Related Battery during replacement of cell 33 in the 'B' Train Auxiliary Building Safety Related Battery

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

Fire Area Tours. The inspectors conducted a tour of the six fire areas listed below to assess the material condition and operation status of fire protection features. The inspectors verified that combustibles and ignition sources were controlled in accordance with the licensee's administrative procedures; fire detection and suppression equipment was available for use; passive fire barriers were maintained in good material condition, and compensatory measures for out-of-service, degraded, or inoperable fire protection equipment were implemented in accordance with the requirements of 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. Documents reviewed are listed in the Attachment.

- Unit 1 1B Emergency Diesel Generator (EDG) Room, Fire Zone 58
- Unit 1/Unit 2 (shared) 1-2A DG Room, Fire Zone 61
- Unit 1/Unit 2 (shared) 1C DG Room, Fire Zone 60
- Unit 1/Unit 2 (shared) 2C DG Room, Fire Zone 57
- Unit 2 2B DG Room, Fire Zone 59
- Unit 2 2A Charging Pump Room, Fire Zone 5

b. Findings

No findings of significance were identified.

## 1R06 Flood Protection Measures

### a. Inspection Scope

Internal Flooding. The inspectors reviewed selected risk-important plant design features and licensee procedures intended to protect the plant and its safety-related equipment from internal flooding events. The inspectors reviewed flood analysis and design documents, including the UFSAR, engineering calculations and abnormal operating procedures for licensee commitments. The inspectors walked-down the area listed below to verify plant design features and plant procedures for flood mitigation were consistent with design requirements and internal flooding analysis assumptions. The inspectors reviewed flood protection barriers, which included plant floor drains, condition of room penetrations, condition of the sumps in the rooms, and condition of water-tight doors. The inspectors also reviewed CRs to verify the licensee was identifying and resolving problems. Documents reviewed are listed in the Attachment.

- Unit 1 A Motor-Driven Auxiliary Water (MDAFW) Pump Room 191

### b. Findings

No findings of significance were identified.

## 1R11 Licensed Operator Regualification

### a. Inspection Scope

Resident Inspector Quarterly Review. On May 8, 2008, 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 Retraining Program Administration (Classroom). The inspectors observed operations simulator exam scenario S4-S1204, conducted in the licensee's simulator for natural circulation cool down following loss of off-site power (LOSP), failed controlling pressurizer level transmitter, vehicle accident resulting in loss of the condensate storage tank and an upgrade to ALERT emergency declaration, and a fire in the control room resulting in control room evacuation. 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. Documents reviewed are listed in the Attachment.

### b. Findings

No findings of significance were identified.

## 1R12 Maintenance Rule Effectiveness

### a. Inspection Scope

The inspectors reviewed the two equipment issues listed below for: (1) appropriate work practices; (2) identifying and addressing common cause failures; (3) scoping in accordance with 10 CFR 50.65(b) of the MR; (4) characterizing reliability issues for performance; (5) trending key parameters for condition monitoring; (6) charging unavailability for performance; (7) classification and reclassification in accordance with 10 CFR 50.65(a)(1) or (a)(2); and (8) appropriateness of performance criteria for structures, systems, and components (SSCs)/functions classified as (a)(2) and/or appropriateness and adequacy of goals and corrective actions for SSCs/functions classified as (a)(1). In addition, the inspectors reviewed events where ineffective equipment maintenance resulted in invalid automatic actuations of Engineered Safeguards Systems affecting the operating units. Documents reviewed are listed in the Attachment.

- 1-2L 600 volt load center bus bar failure
- 2A Auxiliary Building Safety Related Battery cell 33 replacement

### b. Findings

No findings of significance were identified.

## 1R13 Maintenance Risk Assessments and Emergent Work Evaluation

### a. Inspection Scope

The inspectors reviewed the following five activities to verify appropriate risk assessments were performed prior to removing equipment for work. The inspectors verified risk assessments were performed as required by 10 CFR 50.65(a)(4), and were accurate and complete. When emergent work was performed, the inspectors verified the appropriate use of the licensee's risk assessment and risk categories in accordance with the requirements in licensee procedures FNP-0-ACP-52.3, Mode 1, 2, & 3 Risk Assessment; NMP-GM-006, Work Management; and FNP-0-AP-16, Conduct of Operations - Operations Group.

- Unit 1, April 14 – GREEN risk condition due to scheduled maintenance outage of 1A control rod motor generator set concurrent with breaker DL-02-2 out of service
- Unit 2, April 25 – YELLOW risk condition due to scheduled corrective maintenance outage of 1-2L 600 V load center
- Unit 2, April 28 – YELLOW risk condition due to scheduled maintenance on 2B EDG output breaker DG-08-2
- Unit 1, June 26 – YELLOW risk condition due to planned maintenance on 1-2K 600 volt load center and planned maintenance on Turbine Driven Auxiliary Feedwater (TDAFW) Pump

- Unit 1, June 27 – GREEN risk condition due to planned maintenance on TDAFW pump and planned maintenance on the A train reactor trip bypass breaker and 2C station blackout DG

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following five operability evaluations to verify they met the requirements of licensee procedures FNP-0-AP-16, Conduct of Operations - Operations Group 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 (FSDs) to verify system operability was not affected.

- CR 2008101551, Unit 2, 1C DG mechanism-operated cell (MOC) switch contact continuity
- CR 2008102451, Unit 1/Unit 2, truck operated cell switch contact blocks installed in 4kV switchgear prior to completing dedication documentation
- CR 2008103625, Unit 2, feeder breaker to 1-2L 600 volt load center failed to close
- CR 2008103720, Unit 1, grounds on 1-2L 600 Volt load center
- CR 2008103938, Unit 1, 1A coolant charging pump (CCP) casing drain leak

b. Findings

No findings of significance were identified.

1R18 Plant Modifications

a. Inspection Scope

Temporary Modifications. The inspectors reviewed the following temporary modification (TM) and associated 10CFR50.59 screening criteria against the system design bases documentation and the licensee's TM procedure FNP-0-AP-8, Design Modification Control. The inspectors reviewed implementation, configuration control, post-installation test activities, drawing and procedure updates, and operator awareness for this TM. Documents reviewed are listed in the Attachment.

- TM 2080876501, Unit 2, Insertion of Siltemp Cloth into the Space Between the 2B EDG Exhaust and the Diesel Building Horizontal Wall

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 post-maintenance test procedures and test activities for the following four systems/components were adequate to verify system operability and functional capability. The inspectors also witnessed the test or reviewed the test data to verify test results adequately demonstrated restoration of the affected safety function(s). Documents reviewed are listed in the Attachment.

- FNP-0-STP-906.3, SW Building Battery Quarterly Verification following corrective maintenance on the B train #3 battery charger
- FNP-1-STP-227.21A, Main Steam Relief and Atmospheric Steam Dump Discharge Monitor N1D11RE0060B Calibration following failed channel
- 1B Containment Spray following equipment outage
- Unit 1 TDAFW Pump trip and throttle valve testing following discovery of overspeed mechanism trip linkage out of position

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 four 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-M-050, Master List of Surveillance Requirements; and FNP-0-AP-16, Conduct of Operations - Operations Group; and attended selected briefings to determine if procedure requirements were met. Documents reviewed are listed in the Attachment.

Surveillance Tests

- FNP-0-STP-906.4, SW Building Battery Service Test
- FNP-2-STP-905.4, Auxiliary Building Battery Quarterly Verification (Battery 2A)
- FNP-2-STP-905.4, Auxiliary Building Battery Quarterly Verification (Battery 2B)

In-Service Test (IST)

- FNP-2-STP-22.1, 2A AFW Pump Quarterly Inservice Test

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluationa. Inspection Scope

The inspectors evaluated the conduct of routine licensee emergency drills on the following dates to identify any weaknesses and deficiencies in classification, notification, and protective action recommendation (PAR) development activities. The inspectors observed emergency response operation in the simulated control room to verify event classification and notifications were performed in accordance with FNP-0-EIP-9.0, Emergency Classification and Actions. The inspectors used procedure FNP-0-EIP-15.0, Emergency Drills, as the inspection criteria. The inspectors also attended the licensee critique of the drill to compare any inspector-observed weaknesses with those identified by the licensee in order to verify whether the licensee was properly identifying failures.

- May 21, tornado which damaged exhaust of EDG's 1B and 2B, three dropped control rods, unsuccessful manual reactor trip, small-break LOCA with failure of slow speed containment fans 1C and 1D, and large-break loss of coolant accident (LOCA) with subsequent breach of containment resulting in off-site radiological release.

b. Findings

No findings of significance were identified.

## 2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety (OS)

2OS1 Access Controls to Radiologically Significant Areasa. Inspection Scope

As a result of recent industry operating experience, the inspectors discussed control of keys to Locked High Radiation Areas (LHRA)s and Very High Radiation Areas (VHRA)s with the Radiation Protection Manager. The inspectors also reviewed procedural guidance and recent corrective actions associated with LHRA and VHRA key control.

b. Findings

No findings of significance were identified.

#### 4. OTHER ACTIVITIES

##### 4OA1 Performance Indicator (PI) Verification

###### a. Inspection Scope

The inspectors reviewed samples of licensee data for the three Performance Indicators (PIs) listed below to verify the accuracy of the PI data reported during the period listed. Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Indicator Guideline," Rev. 5, was used to verify the basis in reporting for each data element. Documents reviewed are listed in the Attachment.

###### Mitigating Systems Cornerstone

- Mitigating System Performance Index (MSPI) Emergency AC Power
- MSPI Heat Removal
- Safety System Functional Failure (SSFF)

The inspectors reviewed raw PI data, Licensee Event Reports (LERs), and Monthly Operating Reports for the period covering April 2007 through March 2008. 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 operations logs and procedures to verify the PI data was appropriately captured for inclusion into the PI report and the individual PIs were calculated correctly.

###### 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 NRC performed a daily screening of items entered into the licensee's CAP. This review was accomplished by reviewing hard copies of each CR, attending daily screening meetings and accessing the licensee's computerized database.

###### .2 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 CAP and associated documents to identify trends that could indicate the existence of a more significant safety issue. The inspectors' reviewed repetitive equipment and corrective maintenance issues and also considered the results of daily inspector CAP item screening discussed above. The review also included issues documented outside the normal CAP process including system health reports, corrective maintenance Work Orders (WOs), component status

Enclosure

reports, and Maintenance Rule (MR) assessments. The inspectors' review nominally considered the six-month period of January through June, 2008, although some examples expanded beyond those dates when the scope of the trend warranted. The inspectors compared and contrasted their results with the results contained in the licensee's latest integrated quarterly assessment report. Corrective actions associated with the sample of the issues identified in the licensee's trend report were reviewed for adequacy. Specific documents reviewed are listed in the Attachment.

b. Assessment and Observations

The inspectors noted an adverse trend in the licensee's risk assessment process. Since 2003, three violations related to inadequate or incorrect risk assessment of planned plant maintenance. On May 13, 2003, a human performance error resulted from failure of the work week manager to include high voltage switchyard (HVSY) activities in the EOOS risk assessment. On November 14, 2005, the licensee aligned their 1-2K and 1-2L 600 volt load centers to their alternate power supplies. The control room staff started this activity ahead of the planned scheduled time resulting in risk being elevated from a "yellow" to an "orange" status without senior management concurrence and with no additional compensatory actions as required by station procedures. On October 3, 2007, the licensee performed surveillance testing of the Unit 1 main generator differential lockout relay without performing an adequate risk assessment of the effects of this testing. Unit 2 reactor experienced a reactor trip due to loss of HVSY power to the 2B Startup Transformer. The inspectors identified another related issue which occurred on April 25, 2008, during planned maintenance on the 1-2L 600 volt load center. The licensee's initial risk assessment assumed four operating SW pumps. During the maintenance period, only three service water pumps were operating. This issue was determined to be a minor violation. The licensee utilized both work planners and the control room staff as the barriers to ensure that risk is properly evaluated and managed prior to planned maintenance activities. In the above violations, these barriers failed and allowed maintenance activities to occur with errors in the risk evaluations.

.3 Operator Work-Around Annual Review

a. Inspection Scope

The inspectors performed a detailed review of the work-around lists for Unit 1 and 2 that were in effect on April 28, 2008. The inspectors reviewed the proposed corrective actions and schedule for each item on the work-around list. The inspectors reviewed the compensatory actions and cumulative effects on plant operation. The inspectors verified each item was being dispositioned in accordance with plant procedure FNP-0-ACP-17.0, Work-Around Program.

b. Findings

No findings of significance were identified.

#### .4 Selected Issue Follow-up Inspection

##### a. Inspection Scope

In addition to the routine review, the inspectors selected the two issues listed below for a more in-depth review. The inspectors considered the following during the review of the licensee's actions: (1) complete and accurate identification of the problem in a timely manner; (2) evaluation and disposition of operability/reportability issues; (3) consideration of extent of condition, generic implications, common cause, and previous occurrences; (4) classification and prioritization of the resolution of the problem; (5) identification of root and contributing causes of the problem; (6) identification of CRs; and (7) completion of corrective actions in a timely manner.

- CR 2008104120, Unit 1/2, 1-2L 600 volt load center horizontal bus bar found with loose bolts
- CR 2008106308, Unit 1, TDAFW Pump overspeed trip mechanism out of position

##### b. Assessment and Observations

No findings of significance were identified. The inspectors reviewed CR 2008103720 which documented numerous annunciator alarms associated with grounds on the 1-2L 600 volt load center in the Service Water Intake Structure (SWIS). The licensee performed troubleshooting activities the following day to isolate the ground. During these troubleshooting activities, the licensee learned the ground would clear when the Unit 1 portion of 1-2L bus was separated from the Unit 2 portion of the bus. Concurrent with this evolution, the licensee had planned maintenance on alternate supply breaker to the 1-2L 600 volt load center (breaker DL02-2). Breaker DL02-2 failed to close during its planned maintenance. The licensee attempted to substitute another 4160 volt supply breaker, which also failed to close when demanded. The licensee developed a troubleshooting plan which was reviewed by the inspectors. The troubleshooting plan included physical verification of the bus bars located in the rear of 1-2L 600 volt load center. The inspectors observed these troubleshooting activities. The licensee discovered two of the mounting bolts from one of the horizontal bus bars to be excessively loose and wrote CR 2008104120 to capture the abnormal condition. Further investigation revealed a hole burned through the bus bar due to excessive heating from circulating currents caused by the loose mounting bolts. The inspectors determined the licensee identified the abnormal condition in a timely manner commensurate with risk and the licensee's troubleshooting activities adequately determined the root cause of the damaged electrical bus bars. The inspectors monitored the licensee's activities related to extent of cause and determined the licensee adequately addressed extent of cause of other safety related 600 volt load center through actual inspections. The licensee determined the condition only existed on the 1-2L 600 volt load center. The inspectors also reviewed the licensee OD and determined the licensee restored operability by maintaining the load center in a unit specific powered condition. The inspectors reviewed the licensee's work control database for previous inspections of safety related 600 volt load center and learned the licensee did not have established repetitive planned maintenance tasks to inspect the physical bus work of these load centers.

Enclosure

The inspectors determined the licensee promptly identified the plunger of the TDAFW Pump overspeed trip mechanism being out of its normal position following the pump's quarterly inservice test. The licensee performed an evaluation of the data from the quarterly surveillance test and determined the pump had momentarily reached an overspeed condition. The licensee prepared a troubleshooting plan which included testing of the steam supply valves and testing of the overspeed mechanism with the pump uncoupled from its prime mover (turbine). The licensee also inspected the trip linkage of the Unit 2 TDAFWP to verify the linkage in its normal position. The inspectors observed the overspeed testing. The inspectors also interviewed personnel involved in testing of the steam supply valves. The inspectors also reviewed the data from the quarterly inservice test, the licensee's operability/reportability determination, troubleshooting plan and CR. The inspectors determined the above activities properly addressed operability/reportability of the discovered condition. The inspectors also determined the licensee's corrective actions were timely, appropriate, and contained proper classification and prioritization for the discovered condition. The inspectors noted the licensee's troubleshooting failed to determine the cause of the momentary overspeed condition which is still under review by the licensee.

#### 4OA3 Event Follow-up

##### .1 Unit 1 Emergency Alert Declaration

###### a. Inspection Scope

The inspectors responded to an emergency Alert declaration for Unit 1 on March 13. The Alert declaration was made following a failure of the 1B EDG exhaust header. This condition caused the 1B EDG room temperature in the vicinity of a heat detector to increase which resulted in the automatic actuation of the carbon dioxide fire suppression system. The inspectors monitored the licensee's response to the event and assessed follow-up actions. The inspectors verified that operator actions were taken in accordance with licensee procedures and reviewed unit and system indications to verify that actions and system responses were as expected. This event has been entered in the licensee's CAP as CR 2008102490.

###### b. Findings

No findings of significance were identified. The safety significance and regulatory aspects of the 1B EDG exhaust header failure were dispositioned in NRC Inspection Report 05000348/2008011.

##### .2 Fire in Turbine Deck Tool Room

###### a. Inspection Scope

The inspectors responded to a fire in the Turbine Deck tool room on June 13. The fire started as a result of welding that was being performed on metal handrails above the tool room in close proximity to wood decking. Response by licensee personnel and the

automatic actuation of the tool room sprinkler system extinguished the fire. The inspectors monitored the licensee's response to the event and assessed follow-up actions. The inspectors also reviewed the circumstances that resulted in the start of the fire. This event has been entered in the licensee's CAP as CR 2008106022.

b. Findings

No findings of significance were identified.

4OA5 Other Activities

.1 (Closed) Temporary Instruction (TI) 2515/166, Pressurized Water Reactor Containment Sump Blockage (NRC Generic Letter 2004-02) Units 1 & 2

a. Inspection Scope

The inspector reviewed the implementation of the licensee's actions in response to Generic Letter (GL) 2004-02, Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized Water Reactors for Units 1 and 2. Inspections to verify the installation of modifications were performed in May and October of 2007 (NRC Report Nos.: 50-346,364/2007005 and 50-346,364/2007003). The licensee's GL 2004-02 commitments which were incomplete at the time of the inspections included licensing and design basis documentation. The inspector requested information to review the status of the incomplete commitment items and performed an in-office review during the week of May 5-9, 2008, to verify completion of the outstanding commitment items. The following commitment items were reviewed:

1. Net-Positive Suction Head (NPSH) calculations for Residual Heat Removal (RHR) and Component Cooling System (CCS) pumps. Need integration of chemical effects testing into head loss calculations and subsequent input to NPSH calculations. Anticipated date of finalized NPSH calculations Dec. 31, 2007.
2. Increase area of screens to account for chemical effects. ALTERNATE: Results of chemical effects analysis to be incorporated into head loss testing and subsequently input to NPSH calculations.
3. Program (station specification) change to assure mechanistic analysis assumptions related to insulation remain valid.
4. Update licensing basis (UFSAR) to reflect actions taken in response to GL 2004-02. To be done at end of 2007 via change to modification Design Change Package (DCP) to change the appropriate licensing base documents.
5. **UNIT 2 ONLY:** Modification to high head safety injection (HHSI) system throttle valves.

The inspector reviewed the licensee design and licensing documentation to verify that the above items related to GL 2004-02 commitments were completed.

a. Findings and Observations

No findings of significance were identified. With the exception of the Unit 2 HHSI throttle  
Enclosure

valve modifications, the licensee commitments identified in their initial and supplemental responses to GL 2004-02 were complete. The licensee requested and received NRC approval (Letter, USNRC to Farley Nuclear Plant, GL 2004-02: Extension Request Approval, dated July 3, 2007) for completion of modifications to the Unit 2 HHSI throttle valves until the 2008 Unit 2 Fall outage. These modifications will be reviewed via the scheduled triennial Permanent Plant Modifications/10 CFR 50.59 Inspection implemented by the reactor oversight program.

This documentation of TI-2515/166 completion, as well as any results of sampling audits of licensee actions, will be reviewed by the NRC staff (Office of Nuclear Reactor Regulation - NRR) as input along with the Generic Letter (GL) 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors," responses to support closure of GL 2004-02 and Generic Safety Issue (GSI)-191, "Assessment of Debris Accumulation on Pressurized-Water Reactor (PWR) Sump Performance." The NRC will notify each licensee by letter of the results of the overall assessment as to whether GSI-191 and GL 2004-02 have been satisfactorily addressed at that licensee's plant(s). Completion of TI-2515/166 does not necessarily indicate that a licensee has finished all testing and analyses needed to demonstrate the adequacy of their modifications and procedure changes. Licensees may also have obtained approval of plant-specific extensions that allow for later implementation of plant modifications. Licensees planned to confirm completion of all corrective actions to the NRC. The NRC will track all such yet-to-be-performed items related to TI-2515/166 which may include future inspections.

.2 NRC Observed Dry Run Testing of the Forced Helium Dehydration (FHD) System and Supplemental Cooling System (SCS) (IP60854)

a. Inspection Scope

The NRC observed dry run testing of the FHD system and Supplemental Cooling System SCS at the Farley Station on May 5, 2008.

During the next dry cask loading campaign in June 2008, Farley will be loading high burnup spent fuel assemblies for the first time. Dry cask loading of high burnup spent fuel requires use of the FHD and SCS systems, neither of which had been previously tested at Farley. License condition ten of the dry cask storage system requires dry run testing of the FHD and SCS systems prior to first loading of high burnup spent fuel.

The purpose of this inspection was to observe the dry run testing and to evaluate the readiness of the personnel, procedures, and equipment to meet the TS requirements for drying and cooling of high burnup spent fuel. The following observations were made:

- The maintenance procedure used for dry run testing, FNP-0-MP-113.7, was consistent with the technical basis described in the Holtec Final Safety Analysis Report (FSAR), as required by license condition 2.

- Moisture was successfully removed from the canister using the FHD system. The degree of canister dryness and the helium backfill pressure required by the TS were achieved.
- The SCS system was placed in service at the flow required for canister shell cooling and within the time limit required by TS.
- Radiological controls for the dry run testing were established under Radiation Work Permit (RWP) 08-4403. The Radiation Protection personnel demonstrated knowledge of the radiological controls specific to dry cask loading operations.

The licensee dry cask loading personnel had attended training at the manufacturer's facility, had observed operation of these two systems during an actual spent fuel loading operation at another site, and had practiced locally at the Farley station.

b. Findings

No findings of significance were identified.

.3 Quarterly Resident Inspector Observations of Security Personnel and Activities

a. Inspection Scope

During the inspection period, the inspectors conducted observations of security force personnel and activities to ensure that the activities were consistent with licensee security procedures and regulatory requirements relating to nuclear plant security. These observations took place during both normal and off-normal plant working hours.

b. Findings and Observations

No findings of significance were identified.

4OA6 Meetings, Including Exit

.1 Exit Meeting

On July 3, 2008, the NRC presented the inspection results to Ms. Cheri Collins and other members of your staff who acknowledged the findings. The NRC confirmed that proprietary information was not provided or examined during the inspection.

.2 Supplemental Inspection Public Exit and Regulatory Performance Meeting Summary

On July 10, 2008, representatives from the Region II office held a public exit and regulatory performance meeting to discuss the regulatory performance of the Farley Nuclear Plant and to present the results and conclusions of the Supplemental Inspection (95002) conducted between June 6 through June 13, 2008. The results of this inspection were documented in NRC Inspection Report 05000348,364/2008008 which is available in ADAMS. The licensee had evaluated the failures both individually and collectively and the proposed corrective actions were appropriate to resolve the findings.

Enclosure

The attendance list is available in ADAMS as ML081960348. The presentation slides are available in ADAMS as ML081960364.

#### 4OA7 Licensee Identified Violations

The following violations of very low safety significance were identified by the licensee and are violations of NRC requirements which meet the criteria of Section VI.A.1 of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as an NCV.

- 10 CFR 50 Appendix B, Criterion III requires that measures shall be established to assure that applicable regulatory requirements and design basis are correctly translated into specifications, drawings, procedures, and instructions. These measures shall include provisions to assure that appropriate quality standards are specified and included in design documents and that deviations from such standards are controlled. Contrary to the above, the licensee discovered the Chemetronics Model 504 heat detectors (Firestats) installed in the common Farley DG Building are not installed as required per station drawing D-170336. Note 5 on this station design drawing required the detectors to be installed in close proximity to detectors which activate the building's carbon dioxide fire suppression system. The Firestats are installed to control the closing of each individual room ventilation louvers and stop ceiling exhaust fans in those rooms, thus preserving the carbon dioxide fire extinguishing agent. The licensee determined the arrangement of detectors is outside the UL/FM listed spacing required for these detectors. The licensee evaluated the detectors in the other four DG rooms and discovered that three of the four rooms had improper spacing. The licensee has included this condition in their CR system as CR 2008102490. This finding is of very low safety significance because total estimated risk contribution for all fire scenarios was less than  $1E-6$ . A regional Senior Reactor Analyst reviewed the Phase 2 SDP Screening of this performance deficiency and concurred that the matter was of very low safety significance (Green). In addition to reviewing the Phase 2 the analyst performed an independent review using Phase 3 methodology.
- TS 5.7.2 requires that each High Radiation Area (HRA) with radiation levels such that an individual could receive a dose greater than 1000 mrem in one hour be locked and the keys be maintained under the administrative control of the Shift Foreman on duty or health physics (HP) supervision. Contrary to this, on March 26, 2008, it was discovered that there were multiple uncontrolled keys to LHRAs and VHRAs in the possession of various plant employees and not under the administrative control of the Shift Foreman or HP supervision. This violation was discovered by HP supervisors performing an audit of key controls based on recent industry operating experience. Immediate corrective actions were taken upon discovery and documented in CR 2008103011. Although this event involved failure to maintain proper controls to LHRAs and VHRAs, this finding is of very low safety significance because there was no evidence of unauthorized worker entry into the affected areas nor any unexpected radiation exposures to licensee personnel.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### **Licensee personnel**

R. Bayne, Performance Improvement Manager  
E. Carmack, Project Engineer  
S. Chesnut, Engineering Support Manager  
C. Collins, Plant Manager  
P. Hayes, Engineering Director  
L. Hogg, Security Manager  
J. Horn, Training and EP Manager  
J. Jerkins, Performance Improvement Senior Engineer  
J.R. Johnson, Site Vice President  
T. Livingston, Chemistry Manager  
H. Mahan, Licensing Engineer  
B. McKinney, Acting Licensing Manager  
B. Moore, Site Support Manager  
W. Oldfield, Fleet Oversight Supervisor  
C. Peters, HP Manager  
J. Swartzwelder, Work Control Superintendent  
R. Wells, Operations Manager

#### **NRC personnel**

S. Shaeffer, Chief, Branch II, Division of Reactor Projects  
W. Rogers, Senior Reactor Analyst, Region II

### **LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED**

#### **Closed**

2515/166	TI	Pressurized Water Reactor Containment Sump Blockage (NRC GL 2004-02) Units 1 & 2 (40A5.2)
----------	----	--

### **LIST OF DOCUMENTS REVIEWED**

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

Calculation BM-99-1932-01, Internal Flooding Assessment

#### **Procedures:**

FNP-0-ACP-4.0, Switchyard Control, Version 7.0  
FNP-0-AOP-21.0, Severe Weather, Version 23.0  
FNP-1-AOP-5.2, Degraded Grid, Version 11.0  
FNP-1-UOP-3.1, Power Operation, Version 94.0  
FNP-2-AOP-5.2, Degraded Grid, Version 11.0  
FNP-2-UOP-3.1, Power Operation, Version 77.0

**Section 1R04: Equipment Alignment**Drawings

D-172701, Version 5.0, D-175007, Version 27.0, D-205003, Sheet 1, Version 36.0, D-205003, Sheet 2, Version 30.0, D-207001, Version 18.0

Procedures

FNP-1-SOP-22.0, Auxiliary Feedwater System, Version 59.0  
 FNP-1-SOP-22.0A, Auxiliary Feedwater System, Version 8.0  
 FNP-2-SOP-24.0, Service Water System, Version 52.0

**Section 1R05: Fire Protection**

Condition Reports: 2008103019, 2007105684, 2007103236

Miscellaneous:

Farley FSAR Section 9, Appendix 9B, Attachment A, Fire Area Hazards Analysis  
 FNP-0-SOP-0.4, Fire Protection Program Administration Procedure, Version 63.0

Plant Drawings:

A-508651, Sheet 5, Version 6.0  
 A-508651, Sheet 6, Version 3.0  
 A-509018, Sheet 10, Version 9.0

**Section 1R06: Flood Protection Measures**

Condition Reports: 2005112718, 2008104721

Documents:

Calculation BM-99-1932-001, Internal Flooding Assessment  
 RER 1070777201, Unit 1 Auxiliary Feedwater Pump Rooms – Penetration Seals, June 28, 2007

Work Orders:

C060226401, 1062708501, 1062705901

**Section 1R11: Licensed Operator Requalification**Procedures:

FNP-1-ESP-0.2, Natural Circulation Cooldown to Prevent Reactor Vessel Head Steam Voiding, Revision 18  
 FNP-1-ESP-0.3, Natural Circulation Cooldown with Allowance for Reactor Vessel Head Steam Voiding (with RVLIS), Revision 12  
 FNP-1-AOP-100, Instrumentation Malfunction, Version 4.0  
 FNP-0-AOP-29.0, Plant Fire, Revision 34  
 FNP-1-AOP-28.2, Fire in the Control Room, Version 24.0

Simulator Scenario

Scenario S4-S1204, Licensed Operator Continuing Training Simulator Exercise Guide OPS-56400A, April 11, 2008

**Section 1R12: Maintenance Rule Implementation**

Calculation PRA-BC-F-08-001

Condition Reports

2008102531, 2008103741, 2008104378, 2008104530, 2008104718, 2008105145, 2008105267, 2008105768, 2008105772

Plant Drawings:

D-173096, Version 17, D-177046, Version 0, D-207046, Version 5, D-173148, Version 8

Procedures

FNP-2-STP-905.2, "Auxiliary Building Battery Performance Test", Version 6.0 – test performed 09/22/02

Work Orders

1041053701, 2060143601, 2061176601 2062369101 W00696033 W00617975, W00617978, W00686304, W00708170

**Section 1R15: Operability Evaluations**Condition Reports:

2007112277, 2008101551, 2008103938, 2008103625, 2008102451, 2008104276, 2008104280, 2008104278

Documents:

D-173096, Joseph M. Farley Nuclear Plant Unit No. 1 Loads Diagram, Revision 17  
 D-207036, Joseph M. Farley Nuclear Plant Unit No. 2 Logic Diagram Diesel 1C Auto Start and Loading, Revision 10  
 D-207659, Joseph M. Farley Nuclear Plant Unit No. 2 Elementary Diagram Sequencer B2H Bus 2H Load Shedding Circuit, Version 12.0  
 A-506250, Unit 1 Electrical Load List, Version 55.0  
 DOEJ-FX2008103938-M001, Evaluation of CVCS Pump Casing Leak impact on Offsite and Control Room Doses  
 Operability Determination 08-05, Truck Operated Cell Switch Contact Blocks Installed in 4kV Switchgear Prior to Completing Dedication Documentation  
 FNP-0-AP-22, Nonconformance Control/Deficiency Reporting, Version 16.0  
 Work Order 1080865601

**Section 1R18: Plant Modifications**Documentation:

Southern Nuclear Applicability Determination, Addition of Rain Proof Material on 2B Exhaust Header, dated April 17, 2008  
 Farley 10 CFR 50.59 Screening/Evaluation, Addition of Rain Proof Material on 2B Exhaust Header, dated April 18, 2008  
 A-181005, Functional System Description, Diesel Generator System, Version 34.0  
 Work Order 2080876502  
 CR 2008103438

**Section 1R19: Post Maintenance Testing**

Condition Reports: 2008103330, 2008104092, 2008104247, 2008106308

Miscellaneous:

Special Report 2008-002-00, Inoperable Radiation Monitor R-60B, May 9, 2008

Procedures:

FNP-0-STP-906.3, Service Water Building Battery Quarterly Verification, Version 8.0  
 FNP-1-STP-16.2, 1B Containment spray Pump Quarterly Inservice Test, Version 47.0  
 FNP-1-STP-22.23, Turbine Driven Auxiliary Feedwater Pump Trip and Throttle Valve Mechanism and Indication Operability Test, Version 10.0  
 FNP-1-STP-227.21A, Main Steam Relief and Atmospheric Steam Dump Discharge Monitor N1D11RE0060B Calibration, Version 18.0

Work Orders:

S080780901, 1062747901, 1063239801, 1063295201, 1081346901, 1080919901

**Section 1R22: Surveillance Testing**Procedures:

FNP-0-STP-906.4, Service Water Building Battery Service Test, Version 10.0  
 FNP-2-STP-22.1, "2A Auxiliary Feedwater Pump Quarterly Inservice Test" Version 20.0  
 FNP-2-STP-905.4, "Auxiliary Building Battery Performance Test" Version 10.0  
 FNP-2-STP-905.4, "Auxiliary Building Battery Quarterly Verification" Version 12.0

Work Orders:

S063104701, 2061176601, 2062369001, 2062369101, 2062667901, 2063200301, 2063200401,

**Section 1EP6: Drill Evaluation**

Farley Emergency Preparedness Annual Exercise Monitor Package, dated March 10, 2008  
 FNP-0-EIP-9.0, Emergency Actions, Version 59.0  
 FNP-0-EIP-9.2, Emergency Classification, Version 7.0  
 FNP-1-EIP-0, Reactor Trip or Safety Injection, Revision 36  
 FNP-1-ESP-1.1, SI Termination, Revision 24  
 FNP-1-EIP-1, Loss of Reactor or Secondary Coolant, Revision 29  
 FNP-0-CCP-1300, Chemistry and Environmental Activities During a Radiological Accident, Version 48.0

**Section 2OS1: Access Controls to Radiologically Significant Areas**

FNP-0-RCP-0.1, Key Control Program and Health Physics Guidance for Control of High Radiation Areas, Locked High Radiation Areas, and Very High Radiation Areas, Ver. 11.0  
 CR 2008103011, Deficiencies found in LHRA and VHRA key control program, 3/26/08

**Section 4OA1: Performance Indicator Verification**

FNP-0-AP-54, Preparation and Reporting of NRC Performance Indicator Data and NRC Operating Data, Version 9.0  
 Selected Unit 1 and Unit 2 Control Room Logs from April 2007 through March 2008  
 Consolidated Data Entry Unavailability and Unreliability Derivation Reports for MSPI Emergency AC Power from April 2007 through March 2008  
 Consolidated Data Entry Unavailability and Unreliability Derivation Reports for MSPI Heat Removal from April 2007 through March 2008  
 Licensee Event Report 2007-001-0, Technical Specification 3.8.1 Violation Due to Failure of Breaker/Mechanism-Operated Cell (MOC) Switch

Licensee Event Report 2007-003-0, Component Cooling Water Pump Breaker Failures  
 Licensee Event Report 2008-001-0, Emergency Diesel Generator 1B Exhaust Pipe Failure

Condition Reports:

2005109691, 2006100245, 2007112145, 2008100730, 2008100983, 2008102092, 2008102490

**Section 40A2: Identification and Resolution of Problems**

Condition Reports: 2008103720, 2008103741, 2008104120

Procedures and Documents

FN-P-0-ACP-17.0, Workaround Program, Version 4.0

FN-P-1-STP-22.23, Turbine Driven Auxiliary Feedwater Pump Trip and Throttle Valve

Mechanism and Indication Operability Test, Version 10.0

Unit 1 Design Change Request 1070168101, Return Volume Control Tank (VCT) H2 Regulator to Service, Revision 2

Unit 2 Design Change Request 2070168201, Return VCT H2 Regulator to Service, Revision 2

Work Orders

1070168101, 1051151501, 1081346901, 1080865603, 1080920901, 2070168201,

OW61437401, OW64383501, OW67143801, OW67465601

**Section 40A5: Other**

Calculation SM-1050912301-001, Unit 1 NPSH Calculation from Containment Sump to the Residual Heat Removal (RHR) Pumps – Recirculation Mode, version 4.0, dated 4/28/08

Calculation SM-1050912301-002, Unit 1 NPSH Calculation from Containment Sump to the Containment Spray (CS) Pumps – Recirculation Mode, version 4.0, dated 4/28/08

Calculation SM-2050912001-003, Unit 2 NPSH Calculation from Containment Sump to the Residual Heat Removal (RHR) Pumps – Recirculation Mode, version 3.0, dated 4/28/08

Calculation SM-2050912001-004, Unit 2 NPSH Calculation from Containment Sump to the Containment Spray (CS) Pumps – Recirculation Mode, version 3.0, dated 4/28/08

Containment sump Passive RHR & CS Strainer System S0100 Hydraulic Sizing Report, Southern Nuclear Operating Company, Joseph M. Farley Nuclear Plant, Units 1&2, dated April, 2008

ENG-008, General Engineering Guidance, version 9.0, dated 4/29/0

Extension Request Approval for Joseph M. Farley Nuclear Plant Units, 1 and 2, dated December 21, 2007

Letter, Southern Company (Farley Nuclear Plant) to USNRC, Joseph M. Farley Nuclear Plant – Unit 2 Extension Request for Completion of Corrective Actions Associated with GS 2004-02, dated July 3, 2007

Letter, USNRC to Farley Nuclear Plant, GL 2004-02, “Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized Water Reactors,”

Letter, Southern Company (Farley Nuclear Plant) to USNRC, Joseph M. Farley Nuclear Plant – Final Supplemental Response to NRC GL 2004-02, dated April 29, 2008

Specification SS-1109-9, Southern Nuclear Operating Company, Thermal Insulation for Piping and Equipment for Farley Nuclear Plant – Units 1 and 2, version 35.0, dated 12/5/07

UFSAR, Appendix 6D, Containment Sump Description and Emergency Core Cooling System Recirculation sump strainer Design, Rev. 21, dated 1/08.