



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

January 29, 2009

Mr. J. Randy Johnson
Vice President - Farley
Southern Nuclear Operating Company, Inc.
7388 North State Highway 95
Columbia, AL 36319

**SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT - NRC PROBLEM IDENTIFICATION
AND RESOLUTION INSPECTION REPORT 05000348/2008007 AND
05000364/2008007**

Dear Mr. Johnson:

On December 19, 2008, the U. S. Nuclear Regulatory Commission (NRC) completed an inspection at the Farley Nuclear Station. The enclosed inspection report documents the inspection findings, which were discussed on December 19, 2008, with you and other members of your staff during an exit meeting.

The inspection was an examination of activities conducted under your license as they relate to the identification and resolution of problems, and compliance with the Commission's rules and regulations and with the conditions of your operating license. Within these areas, the inspection involved examination of selected procedures and representative records, observations of plant equipment and activities, and interviews with personnel.

On the basis of the sample selected for review, there were no findings of significance identified during this inspection. The inspectors concluded that problems were properly identified, evaluated, and resolved within the problem identification and resolution programs. However, during the inspection, several examples were identified in which conditions adverse to quality were not promptly entered into the corrective action program or in which errors were made in risk determination.

Additionally, the inspectors reviewed the status of your continuing actions associated with Farley's previous status in the degraded cornerstone of the NRC's action matrix. Based on this sample, the inspectors determined that the corrective actions to address the issues identified during the 2008 supplemental IP 95002 and IP 95001 inspections conducted at Farley either were addressed or were appropriately scheduled for completion.

SNC

2

In accordance with the Code of Federal Regulations 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 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/

Steven J. Vias, Chief
Reactor Projects Branch 7
Division of Reactor Projects

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

Enclosure: Inspection Report 05000348/2008007 and 05000364/2008007
w/Attachment: Supplemental Information

cc w/encl: (See page 3)

In accordance with the Code of Federal Regulations 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 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/

Steven J. Vias, Chief
Reactor Projects Branch 7
Division of Reactor Projects

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

Enclosure: Inspection Report 05000348/2008007 and 05000364/2008007
w/Attachment: Supplemental Information

cc w/encl: (See page 3)

PUBLICLY AVAILABLE NON-PUBLICLY AVAILABLE SENSITIVE NON-SENSITIVE
ADAMS: Yes ACCESSION NUMBER: ML090300025 SUNSI REVIEW COMPLETE SJV

OFFICE	RII:DRP	RII:DRP	RII:DRP	RII:DRP	RII:DRP	RII:DRP	RII:DRP
SIGNATURE	SPA	SPA for	SPA for	SPA for		SJV for	SJV
NAME	SAwater	DMerzke	ECrowe	AHutto	CRapp	SShaeffer	SVias
DATE	01/27/2009	01/28/2009	01/28/2009	01/28/2009	1/ /2009	01/28/2009	01/28/2009
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES	YES NO	YES

OFFICIAL RECORD COPY DOCUMENT NAME: S:\DRP\RPB7\PI&R\PI&R\FARLEY PI&R INSPECTION REPORT 2008007
FINAL.DOC

cc w/encl:

Angela Thornhill
Managing Attorney and Compliance Officer
Southern Nuclear Operating Company, Inc.
Electronic Mail Distribution

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

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

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

Senior Resident Inspector
Southern Nuclear Operating Company, Inc.
Joseph M. Farley Nuclear Plant
U.S. NRC
7388 N. State Highway 95
Columbia, AL 36319

SNC

4

Letter to J. Randy Johnson from Steven J. Vias dated January 28, 2009

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT - NRC PROBLEM IDENTIFICATION
AND RESOLUTION INSPECTION REPORT 05000348/2008007 AND
05000364/2008007

Distribution w/encl:

C. Evans, RII
L. Slack, RII
OE Mail
RIDSNRRDIRS
PUBLIC
R. Martin, NRR

U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 50-348, 50-364

License Nos.: NPF-2, NPF-8

Report No.: 05000348/2008007, 05000364/2008007

Licensee: Southern Nuclear Operating Company Inc.

Facility: Joseph M. Farley Nuclear Plant

Location: Columbia, AL

Dates: December 1 - 5, 2008 and December 15 - 19, 2008

Inspectors: S. Atwater, Senior Project Inspector
D. Merzke, Senior Project Inspector
E. Crowe, Senior Resident Inspector, Farley
A. Hutto, Senior Resident Inspector, Oconee

Accompanying Personnel: J. Heath, Project Engineer (in training)
N. Karlovich, Construction Inspector (in training)

Approved by: S. J. Vias, Chief
Reactor Projects Branch 7
Division of Reactor Projects

Enclosure

SUMMARY OF ISSUES

IR 05000348/2008007 and 05000364/2008007; 12/01/2008 – 12/19/2008; Farley Nuclear Station, Units 1, 2; Identification and Resolution of Problems.

The inspection was conducted by two senior project inspectors, two senior resident inspectors, a project engineer (in training) and a construction inspector (in training). No findings of significance were identified. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

Identification and Resolution of Problems

The inspectors identified that the licensee was effective at identifying problems and putting them into the corrective action program (CAP). The licensee's effectiveness at problem identification was evidenced by a CR generation rate of approximately 1000 per month. However, the inspectors identified two examples of delayed identification. The licensee effectively used risk in prioritizing the extent to which individual problems would be evaluated and in establishing schedules for implementing corrective actions. However, the inspectors identified two examples where errors were made in risk evaluation. Licensee assessments were found to be effective. Assessment results adequately identified problems.

Operating experience usage was found to be effective. Operating experience had been integrated into the licensee's processes for managing work and plant operations. However, the licensee had not been periodically reviewing the Part 21 Notices provided on the NRC public web site. On the basis of interviews conducted during the inspection, workers at the site felt free to input safety findings into the CAP.

The corrective actions implemented and planned, to address the issues identified during the 2008 supplemental IP 95002 and IP 95001 inspections were appropriately targeted. The licensee's response to pipe wall thinning and valve replacement in the Service Water System has been commensurate with safety significance.

A. NRC-Identified and Self-Revealing Findings

None.

B. Licensee-Identified Violations

None.

Enclosure

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution

a. Assessment of the Corrective Action Program

(1) Inspection Scope

The inspectors reviewed items selected across the seven cornerstones of safety to determine if problems were being properly identified, characterized, and entered into the CAP for evaluation and resolution. Specifically, the inspectors selected and reviewed 145 CRs from approximately 17,000 that had been issued between June 1, 2007 and December 1, 2008. The inspectors conducted a detailed review of the CRs associated with the following four risk-significant systems: High Head Safety Injection, Normal Charging, Low Head Safety Injection and Residual Heat Removal. Age-dependent issues related to these systems were also included in the review. In addition the inspectors reviewed CRs associated with unplanned reactivity excursions, human error events, temporary modifications, radiological events and security events.

Also, the licensee's efforts in establishing the scope of problems were evaluated by reviewing CRs, work orders, work histories, action items, self assessments, system health reports, and other documents listed in the Attachment.

The inspectors attended various plant meetings to understand the interface between the CAP and the work control process, and to observe management oversight of the corrective action process. These included the Plan of the Day (POD), CAP Coordinator (CAPCO), Management Review Meeting (MRM), Status Control Oversight Group (SCOG), and Engineering Review Board (ERB) meetings.

The inspectors conducted walkdowns of the plant and control room to identify deficiencies that had not yet been entered into the CAP, and to identify other processes that may exist where problems and findings could be identified.

(2) Assessment

Identification of Issues

The inspectors determined that the licensee was effective at identifying problems and entering them into the CAP. The licensee's effectiveness at problem identification was evidenced by a CR generation rate of approximately 1,000 per month.

During the system reviews and walkdowns, the inspectors did not identify any problems that had been corrected outside of the CAP or that were not in the CAP for resolution. The inspectors determined that assessments were thorough and the problems identified through them had been entered into the CAP.

Enclosure

Although the licensee was generally effective at identifying, the following minor exceptions were observed:

- Southern Nuclear Operating Company, Inc. provides Farley with new instrument scaling factors for each operating cycle. Prior to the last Unit 2 startup, I&C Maintenance recognized they had not received the 12 new steam/feed flow transmitter scaling factors. At the time, plant staff did not identify the need to evaluate the cause of this omission, and did not generate a CR. I&C Maintenance retrieved the scaling factors and installed them prior to startup. When notified by the inspectors of this observation, the licensee; a) generated CR 2008113717 to verify that the correct steam/feed flow transmitter scaling factors had been installed in Unit 1 during its last outage; b) generated CR 2008110778 to revise the inadequate engineering procedure and then closed it to Action Item 2008208757 to track completion of the procedure change prior to the next Unit 1 startup in May 2009; and c) generated CR 2008113801 to perform a broader evaluation of the potential for loss of a critical corrective action in the procedure revision process due to lack of a positive feedback loop.
- The last batch of new nuclear fuel assemblies shipped to Farley had been potentially contaminated with resin during fabrication. This was known by the licensee on July 31, 2008, and not entered into the Farley CAP program until September 8, 2008, under CR 2008109929. Westinghouse evaluated the impact of resin contamination in the fuel and determined there was no impact. The licensee generated corporate CR 2008100774 to determine the cause for this delay in problem identification.

Prioritization and Evaluation of Issues

The inspectors determined that the licensee was effective at prioritizing and evaluating problems. The licensee had prioritized problems in accordance with established procedures and commensurate with safety significance. Operability and reportability had been determined within technical specification time limits. Evaluations considered common cause, generic concerns, and extent of condition, and were technically accurate. Generally, the licensee's evaluations were of sufficient depth to accurately identify the causes. However, the inspectors observed the following minor exceptions:

- A low differential pressure across the reactor coolant system (RCS) letdown filter was documented under CR 2007109050, and premature clogging of the reactor coolant pump (RCP) seal injection filter was documented under CR2007107695. The licensee had not recognized that these two conditions were related to each other. As a result, each CR was individually assigned a SL-5. Since plugging of the in-service RCP seal injection filter could potentially cause a loss of seal injection and subsequent failure of the RCP seals, both CRs should have been classified as an SL-4 with a basic cause determination. The licensee generated CR 2008113207 to begin trending the differential pressures across the in-service filters to preclude plugging.

- The breaker supplying power to the Shift Supervisor/Shift Manager office and the kitchen had been regularly tripping for more than 11 years. Approximately five years ago, the electrical loads were divided onto separate power strips plugged into wall receptacles. Since that time, overload conditions have been faulting the power strips prior to tripping the main supply breaker. This condition was assigned a low priority and was not scheduled for resolution based on its apparent lack of significance. However, the licensee had not considered the impact of an electrical fire in this space. Since this area was within the control room envelope, a fire could potentially compromise control room habitability, thus raising the significance of this issue. In response to our review of this condition, the licensee generated CR 2008113615 to investigate and correct the cause for the low voltage condition (108 vs. 120 volts) at the office receptacles. Because an electrical fire in this space would be localized and of low intensity, the inspectors determined there was no immediate safety concern.

Effectiveness of Corrective Actions

The inspectors determined that the licensee's corrective actions were effective. Corrective actions were targeted to correct the identified causes and were generally implemented in a manner commensurate with safety significance. However, the inspectors observed the following exceptions:

- On April 8, 2008, CR 2008103910 documented an unexpected increase in reactor power above 2775 MWth. The operator immediately inserted control rods and borated the RCS to return the 15-minute average power to below 2775 MWth. The CR was assigned a SL-3 with an apparent cause determination required. The apparent cause was erratic operation of Letdown Heat Exchanger CCW Discharge Valve TCV-3083. TCV-3083 had caused five letdown temperature swings since February 2005, as identified during the 2007 NRC PI&R inspection. The licensee generated CR 2008113819 to evaluate this continuing condition.
- CR 2008103589, "Under Classification of CRs", was generated during the licensee's preparation for the NRC 95002 supplemental inspection. The corrective action was to re-evaluate five specific CRs and to reclassify them as appropriate. The documentation reviewed during this inspection indicated the CR had been closed with no action taken. However the licensee stated that the re-evaluations had been performed but not documented. The licensee re-opened the CR and re-performed the evaluations.

(3) Findings

No findings of significance were identified.

b. Use of Operating Experience (OE)

(1) Inspection Scope

The inspectors reviewed selected industry operating experience items, including NRC generic communications, to verify that they had been appropriately evaluated for applicability and that issues identified through these reviews had been entered into the CAP.

The inspectors assessed the licensee's use of NRC Information Notice IN 2007-34, "Operating Experience Regarding Electrical Circuit Breakers", by reviewing CRs related to circuit breakers.

The inspectors selected the Part 21 notices provided on the NRC public web page to determine if the licensee had reviewed them for applicability to the Farley Station.

(2) Assessment

The inspectors determined that the licensee's use of operating experience was generally effective. Six circuit breaker related CRs were reviewed and applicable elements of NRC Information Notice IN 2007-34 had been incorporated into all of them. Although operating experience had been screened for applicability to the plant, the inspectors observed the following exception:

- The licensee had not been reviewing all Part 21 notices. As a result, there were 24 Part 21 notices that had not been reviewed for applicability to the Farley plant. The licensee generated CR 2008113191 to perform the applicability review and subsequently identified that Part 21 notices 2008-016 and 2008-24 were applicable to Farley. The licensee generated CR 2008113229 to evaluate Part 21 Notice 2008-016 and CR 2008113445 to evaluate Part 21 Notice 2008-24. The licensee also generated Action Item 2008208150 to evaluate and correct this gap in their Operating Experience program.

(3) Findings

No findings of significance were identified.

c. Use of Self Assessments and Audits

(1) Inspection Scope

The inspectors reviewed the five licensee assessments performed between January 2007 and August 2008 to verify that the issues identified had been entered into the CAP.

The inspectors reviewed the status of the CAP Improvement Plan and the Monthly CAP Health Indicators for October and November 2008 to determine if CAP health was improving.

(2) Assessment

The inspectors determined that the licensee's use of assessments was effective. Assessments were critical, insightful, thorough and comprehensive. The problems identified through the assessments had been entered into the CAP and had been brought to the attention of the appropriate levels of plant management. The corrective actions generated were appropriately targeted to effect resolution of the issues raised.

The CAP health indicators were changed in May/June 2008 to more accurately reflect CAP health. The run time since the health indicator change showed CAP health to remain in the RED for several months. The first improvement appeared in October when the CAP health went to YELLOW. There has been continued improvement through November, but the health report remained in YELLOW at the time of the inspection. The inspectors attributed the improvements largely to more thorough and higher quality root cause analyses, more focused and timely corrective actions, and more critical effectiveness reviews.

(3) Findings

No findings of significance were identified.

d. Safety-Conscious Work Environment

(1) Inspection Scope

The inspectors randomly interviewed 25 members of the plant staff to develop a general perspective of the safety-conscious work environment at the site, and to determine if any conditions existed that would cause employees to be reluctant to raise safety concerns.

The inspectors interviewed the Concerns Program Coordinator and reviewed a sample of completed reports to verify that concerns were being properly reviewed and resolved.

(2) Assessment

The inspectors determined that a safety conscious work environment existed at the Farley station. Interviews with plant staff from various departments indicated that plant management actively encouraged employees to raise issues through the CAP and other programs. The inspectors did not identify any reluctance on the part of the licensee staff to report safety concerns. Personnel interviewed were aware of the avenues available to them for reporting concerns.

(3) Findings

No findings of significance were identified.

e. Implementation of the Action Items Generated From the 2008 Supplemental NRC IP 95002 Inspection

(1) Inspection Scope

The inspectors reviewed the IP 95002 supplemental inspection action items that had been implemented and the two interim effectiveness reviews that had been conducted.

The inspectors reviewed the licensee's planned corrective actions for returning the Unit 2 RHR system from maintenance rule (a)(1) status to (a)(2) status.

The inspectors reviewed the licensee's Nine-Month Response to NRC GL 2008-01 and the licensee's upgraded root cause analysis for the 2A HHSI Pump Air Binding event.

The inspectors reviewed the licensee's corrective actions to maintain operability of the Unit 1 and Unit 2 encapsulated motor operated valves (MOVs) in the Residual Heat Removal and Containment Spray Systems. Continued operability of these MOVs has been challenged due to water intrusion into the MOV encapsulations, and has been documented as Unresolved Issue (URI) 05000348,364/2007005-01, "Potential Flooding of Containment Sump Suction Valves."

(2) Assessment

The IP 95002 supplemental inspection generated 438 Action Items distributed across the following eight performance improvement areas:

- Vendor Oversight
- Circuit Breakers
- CAP Program
- Proactive Engineering
- Motor Operated Valves
- Encapsulation
- Design Change Reviews
- Safety Culture

At the time of this inspection, 334 of the 438 Action Items were complete (76%). All but three areas were scheduled to be completed by the end of 2009. The three areas that will carry over into 2010 are:

- Encapsulation Design Change
- Final Effectiveness Review for CAP Improvement
- Design Change Improvement.

Once the Action Items for a specific improvement area were completed, effectiveness reviews were conducted by the licensee. The effectiveness criteria were established in Procedure NMP-GM-002-002, "Effectiveness Review Instructions". Two interim effectiveness reviews had been completed to date. The Air and Vacuum circuit breaker program had been evaluated under CR 2008112556 and showed marked improvement

in breaker performance and reliability. The CAP improvement program was evaluated under CR 2008109651, however the run time was too short to assess effectiveness.

The inspectors reviewed documents and conducted interviews with station personnel to identify any issues related to the health of the Residual Heat Removal (RHR) system. The review did not identify any issues beyond those identified by the licensee. The inspectors reviewed the licensee's planned corrective actions related to returning the Unit 2 RHR system to (a)(2) status and determined that the corrective actions were sufficient to address the causes for the failures.

The inspectors reviewed the licensee's Nine-Month Response to NRC GL 2008-01 as described in a letter to the NRC dated October 10, 2008 and documented in CR 2008100242. The inspectors also reviewed the licensee's upgraded root cause analysis for the 2A HHSI Pump Air Binding event. Based on these reviews, the inspectors determined the planned corrective actions were sufficient to address the causes for the air binding.

The inspectors also reviewed the licensee's actions to maintain operability of the Unit 1 and Unit 2 encapsulated motor operated valves (MOVs) in the Residual Heat Removal and Containment Spray Systems, as tracked under Unresolved Issue (URI) 05000348, 364/2007005-01, "Potential Flooding of Containment Sump Suction Valves."

The short term corrective actions taken to date included:

- Weekly draining of the valve encapsulations
- Boring holes into the vertical pipe chases and installing drain piping, to allow for quarterly inspection and draining. The original design did not provide a means to monitor water buildup in the vertical pipe chases.
- Analyzing the potential sources of water. The licensee used a vendor who determined the likely potential sources to be valve stem leakage, condensation from room coolers located above the encapsulation, and/or water remaining in the associated vertical pipe chases from plant construction. The chemical characteristics of the water removed from the vertical pipe chases also indicated ground water intrusion was possible, but not likely.

The long term corrective actions under consideration by the licensee were:

- Replacing the motor operators with operators environmentally qualified for 100% humidity conditions
- Increasing the frequency of valve and encapsulation planned maintenance
- Removing the top half of the valve encapsulation and leaving it open. This was the licensee's preferred choice, however a licensee amendment would be required to use an alternate source term.

Based on the small amounts of water drained from the vertical pipe chases and enclosures, the inspectors concluded that the draining periodicity was sufficient to detect water in-leakage prior to actual submergence of the motor operated valve actuator. Based on the licensee's actions and current monitoring plans, URI 05000348,364/2007-005-01 is closed.

Enclosure

(3) Findings

No findings of significance were identified.

f. Implementation of the Action Items Generated From the 2008 Supplemental NRC IP 95001 Inspection

(1) Inspection Scope

The inspectors reviewed the corrective actions implemented to address the Action Items generated from the supplemental IP 95001 inspection concerning two run failures on the Emergency Diesel Generator (EDG) 1B in the first quarter of 2008.

(2) Assessment

The first EDG run failure was caused by failure of the speed sensing circuitry. The second EDG run failure was caused by improper installation of the exhaust manifold. The corrective actions taken to date included:

- Replacing the low speed signal generators on all EDGs
- Activating a coincidence circuit with low jacket water pump discharge pressure to eliminate the single point vulnerability
- Replacing the exhaust manifolds.
- Replacing the EDG output breakers. This was carried over from the 2007 supplemental 95001 inspection.

The coincidence circuit modification has been completed on all three of the large EDGs (1B, 2B, and 1-2A). A similar modification has been completed on the 1C EDG (small EDG). The modification was not yet complete on the 2C EDG (small EDG). Based on a review of the completed and planned work orders, the inspectors concluded that the corrective actions appropriately targeted the conditions.

(3) Findings

No findings of significance were identified.

g. Assessment of Licensee's Response to Pipe Wall Thinning and Valve Replacement in the Service Water System

(1) Inspection Scope

The inspectors reviewed the licensee's response to pipe wall thinning in the Service Water system, as tracked through CR 2008110110. The 2006 pipe wall thickness evaluation supported piping replacement in 2009. Recent instances of through-wall leakage indicated that some piping may need replacement sooner.

The inspectors reviewed the licensee's response to NCV 05000348, 364/2007-006-01 "Failure to Promptly Identify the Complete Population of Service Water Valves Affected by the System's Corrosive Environment and Correct the Condition".

(2) Assessment

The licensee determined the cause of the through-wall leak in the service water supply line to the motor-driven auxiliary feedwater (MDAFW) pump room to be microbiologically induced corrosion (MIC). Ultrasonic testing (UT) conducted in December 2006 identified significant degradation in this pipe, with a projected end-of-life of 2009. During the 2006 inspection campaign, the licensee identified additional areas of significant degradation and immediately performed UT examinations of five additional areas also susceptible to MIC degradation. In response to these examination results, the licensee has performed G-Scan examinations of large runs of service water piping.

The inspectors reviewed the results of the examinations and verified that all areas identified by the licensee with significant degradation were scheduled to be replaced with stainless steel piping resistant to MIC degradation. The licensee has also scheduled quarterly UT examinations to monitor degradation rates to ensure service water piping was replaced prior to failure. Affected portions of the Unit 1 Service water piping were scheduled to be replaced during the next outage in March 2009.

The inspectors reviewed the actions taken by the licensee to address NCV 05000348, 364/2007-006-01. The licensee had identified 22 valves affected by the Service Water system's corrosive environment. A broadness review determined that the valves were not susceptible during procedure change notices implemented in the 1990's on service water piping. The proposed corrective actions included:

- developing an engineering document to evaluate the most appropriate stainless steel replacement valves for each unit
- developing a prioritization plan for valve replacement
- submitting work requests for the replacements

Based on a review of the work orders and proposed valve replacement plans, the inspectors concluded that the current corrective actions appropriately targeted to address the degradation in the Service Water system due to corrosion.

(3) Findings

No findings of significance were identified.

40A6 Exit Meeting

On December 19, 2008, the inspectors presented the inspection results to Mr. Randy Johnson and other members of the Farley plant staff who acknowledged the results. The inspectors confirmed that proprietary information had not been retained by the NRC following the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

SUPPLEMENTAL INFORMATION

LIST OF PERSONS CONTACTED

Licensee:

L. Blair	Work Week Coordinator
S. Brumfield	Performance Improvement CAP Supervisor
C. Collins	Plant Manager
P. Crone	I&C Team Leader
B. Danford	Mechanical Maintenance Supervisor
K. Dansby	Maintenance Engineer - Rework Coordinator
B. Doran	Instrument and Control Maintenance Supervisor
D. Enfinger	Performance Improvement - Self Assessments
V. Floyd	Engineering Support - Inverter System Engineer
D. Forrester	Electrical Maintenance Supervisor
M. Goocher	Engineering Support - Service Water System Engineer
A. Gray	Performance Improvement Supervisor
B. Griner	Engineering Support Manager
L. Hogg	Security Manager
JJ. Hutto	Operations Superintendent
J. Jerkins	Site CAPCO
R. Johnson	Site Vice President
M. Ludlum	Performance Improvement
H. Mahan	Principal Licensing Engineer
R. Martin	Special Project Manager
J. McCrory	Engineering Supervisor
C. Medlock	Site Design Manager
B. Moore	Site Support Manager
K. Moore	Engineering Supervisor - Equipment Reliability
D. Morrow	Engineering Supervisor - Programs
A. Patko	Mechanical/Civil Engineer Corporate
C. Peters	Health Physics Manager
W. Sims	Performance Improvement - OE Coordinator
A. Spears	Engineering Supervisor - BOP Systems
R. Wells	Operations Manager
C. Westberry	Engineering Supervisor
S. Wilson	Facilities Foreman

NRC:

S. Shaeffer	Branch Chief, Reactor Projects Branch 2
S. Vias	Branch Chief, Reactor Projects Branch 7
E. Crowe	Senior Resident Inspector - Farley
S. Sandal	Resident Inspector - Farley

LIST OF ITEMS CLOSED AND DISCUSSED

Closed:

URI 05000348,364/2007005-01, "Potential Flooding of Containment Sump Suction Valves" (Section 4OA2.e)

Discussed:

NCV 05000348,364/2007-006-01 "Failure to Promptly Identify the Complete Population of Service Water Valves Affected by the System's Corrosive Environment and Correct the Condition" (Section 4OA.g).

LIST OF DOCUMENTS REVIEWED

Procedures:

FNP-0-AP-13, "Control of Temporary Alterations"
FNP-0-ETP-4495, "Non-Code Repair of ASME Code Class 2 and 3 Moderate Energy Piping (Generic Letter 90-05 or Code Case N-513-1 Evaluation)", Version 3.0
FNP-0-IMP-0.13, "Instrument Maintenance Procedure", Revision 5
FNP-0-IMP-AMP-14, "Service Water Program License Renewal Implementation Package"
FNP-0-M-82, "Service Water Plan", Version 10
FNP-0-M-112.0, "License Renewal Program"
FNP-0-SP-22, "Testing of Security Systems", Version 26.0
FNP-1-SOP-2.1, "Chemical and Volume Control System - Plant Startup and Operation"
FNP-1-SOP-22.0, "Auxiliary Feedwater System", Version 59
FNP-1-STP-256.1, "Reactor Safeguards Response Time Test", Revision 15
FNP-1/2-STP 156.0, "Inservice Inspection (Pressure Testing) of Class 3 Systems and Components", Version 9
NMP-GM-002-001, "Corrective Action Program", Revision 6
NMP-GM-002-002, "Effectiveness Review Instructions", Version 1.0
NMP-MA-006, "Rework Program", Version 2.0
NMP-GM-008, "Operating Experience Program", Version 5.0
NMP-GM-008-GL03, "Guideline for Screening OE"
NMP-GM-008-GL04, "Guideline for Screening Internal OE for Posting"

CRs:

2001001652	2005107180	2005107178	2005112351	2007100142	2007102215
2007102566	2007102646	2007103578	2007104432	2007104849	2007104856
2007104844	2007104852	2007104972	2007105709	2007105556	2007105809
2007106027	2007106042	2007106211	2007106751	2007106778	2007106837
2007106891	2007107452	2007107469	2007107695	2007107722	2007107849
2007108371	2007108492	2007108601	2007108636	2007109050	2007109131

2007109419	2007109472	2007109642	2007109659	2007109891	2007110245
2007110502	2007110727	2007110730	2007110922	2007111122	2007111172
2007111304	2007111408	2007111510	2007111551	2007111679	2007111680
2007111698	2007111796	2007112400	2007112660	2007112863	

2008100060	2008100242	2008100466	2008100714	2008100730	2008100818
2008100859	2008100890	2008101565	2008101956	2008100983	2008101203
2008101674	2008101686	2008101902	2008101924	2008101986	2008102021
2008102092	2008102216	2008102490	2008102507	2008102566	2008102650
2008103011	2008103461	2008103589	2008103680	2008103720	2008103910
2008104123	2008104567	2008104948	2008104960	2008105002	2008105173
2008105342	2008105378	2008105505	2008105646	2008105752	2008105779
2008105994	2008106027	2008106454	2008106457	2008106606	2008106703
2008106742	2008106757	2008106761	2008107124	2008107412	200810729
2008107917	2008107963	2008108292	2008109207	2008109427	2008109532
2008109651	2008109929	2008110110	2008110122	2008110125	2008110448
2008110730	2008110930	2008111313	2008111582	2008111878	2008111946
2008112165	2008112263	2008112378	2008112351	2008112556	2008112919
2008113136	2008113150	2008113176	2008113229	2008113445	2008113481
2008113502	2008113645				

Work Orders:

C072201702	S052028801	1072819001	1080358001	1081051901	1081332201
2052029101	2080358101				

Work Histories:

MOV 8701A	MOV 8701B
MOV 8702A	MOV 8702B
MOV 8809A	MOV 8809B
MOV 8726A	MOV 8726B

Action Items:

2007202114	2007204908	2007205165	2007205167	2007205169	2007205176
2007205177	2007205253	2008204137	2008204138	2008204140	2008205298

Temporary Modifications:

1062739301	1071218501	2070142501	2071001901	2071012801	2071225901
2080876501	2082089301	2082334601	S071241601		

Assessments:

Farley Nuclear Plant, Southern Nuclear 2008 Excellence Assessments from July 21 through August 1, 2008.

SNC Fleet Organization Team OE Self Assessment from August 4-13, 2008.

Organization/Plant Problem Identification and Resolution Self Assessment from September 8-19, 2008.

Southern Nuclear 2008 Fleet Maintenance Rule Team Self Assessment for Farley from September 30 – October 3, 2008

Subalusky Services, Inc. “Assessment of the Southern Nuclear Company Nuclear Safety Culture”, dated January 2, 2007.

Other Documents:

Charging Pump Gassing Issue Action Plan; Letter dated 10 October, 2008 - Farley Nine-Month Response to NRC GL 2008-01; Farley GL 2008-01 Action Item Summary

Component Mispositioning index 2006-2008
 2008 Midyear Mispositioning Adverse Trend
 2007 Midyear Mispositioning Adverse Trend
 2006 Midyear Mispositioning Adverse Trend

Corrective Action Program Improvement Project, dated 7/20/2008 - Report on Historical Review of CRs and Action Items

DOEJ-FX-2008100730-M001, 1-2A Jacket Water Expansion Tank Level and EDG Functional Impact with Turbocharger Cooling Water Outlet Flange Leak

DOEJ-SM-1072422501-001, Evaluation of Poly Sheet in Containment During Mode 4 Operation

NRC Information Notice 2007-34: Operating Experience Regarding Electrical Circuit Breakers, dated October 22, 2007

Intracompany Correspondence C080758701; Vendor Presentation: Encapsulation & Vertical Pipe Chase Water Intrusions

Intracompany Correspondence; Response to NRC IN 2007-34: Operating Experience Regarding Electrical Circuit Breakers

PS-05-2052, Final Report – Service Water RT/UT Inspections – 2005

PS-07-0621, Final Report – 2006 Service Water Piping RT/UT Inspections
 Structural Integrity Associates, Inc., Flaw Evaluation for SW Supply to Aux Feedwater at Farley Using ASME Code Case N-513-2, October 29, 2008

RHR System Health Report 3rd Quarter 2008

SNC RHR System Monitoring Plan

System Health Report, Chemical Volume Control System (CVCS/HHSI), 3rd QTR 2008

UFSAR Section 6.3, Emergency Core Cooling System

CRs Generated During This inspection:

- 2008100774 - Nuclear Fuel Potential Contamination
- 2008110778 - Unit 2 Steam/Feed Flow Transmitter Scaling Factors
- 2008113191 - Operating Experience and Part 21
- 2008113207 - RCS and Seal Injection Filters
- 2008113229 - Operating Experience and Part 21
- 2008113445 - Operating Experience and Part 21
- 2008113615 - Shift Supervisor Office Low Voltage Condition
- 2008113629 - Control Room Combustibles
- 2008113717 - Unit 1 Steam/Feed Flow Transmitter Scaling Factors
- 2008113801 - Potential Loss of a Critical Corrective Action Due to Lack of a Feedback Loop
- 2008113819 - Letdown Heat Exchanger CCW TCV-3083

Action Items Generated During This inspection:

- 2008208150 - Operating Experience and Part 21 Notices