



UNITED STATES  
 NUCLEAR REGULATORY COMMISSION  
 REGION II  
 101 MARIETTA STREET, N.W., SUITE 2900  
 ATLANTA, GEORGIA 30323-0199

Report Nos.: 50-348/95-16 and 50-364/95-16

Licensee: Southern Nuclear Operating Company, Inc.  
 P.O. Box 1295  
 Birmingham, AL 35201-1295

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

Facility Name: Farley Nuclear Plant, Units 1 and 2

Inspection Conducted: August 21 through September 17, 1995

Inspectors:	<u>[Signature]</u> VIA Phone	<u>10/13/95</u>
	T. M. Ross, Senior Resident Inspector	Date Signed
	<u>[Signature]</u>	<u>10/13/95</u>
	M. A. Scott, Resident Inspector	Date Signed
	<u>[Signature]</u>	<u>10/13/95</u>
	P. C. Hopkins, Vogtle Resident Inspector	Date Signed
Approved by:	<u>[Signature]</u>	<u>10/13/95</u>
	H. Q. Christensen, Chief Reactor Projects, Branch 1A Division of Reactor Projects	Date Signed

SUMMARY

Scope:

This routine resident inspection was conducted onsite in the functional areas of operations, maintenance/surveillance, engineering/technical support and general plant support. The inspection included a review of nonroutine events and a follow-up of previous inspection findings. Backshift inspections were conducted on August 21, 22, 23, 26 and 31, and, September 5, 7, 11, 14, 15, and 16.

Results:

Operations

Operations personnel and management continued to perform well in maintaining steady-state operations of Units 1 and 2. Operators remained attentive to changing plant conditions and were well-versed on plant status and ongoing activities. On September 15, Unit 1 was shutdown without incident for its 13th refueling outage.

### Maintenance/Surveillance

Maintenance and surveillance personnel consistently performed assigned activities in accordance with work orders and applicable procedures. Personnel continued to demonstrate familiarity with administrative procedures and radiological controls. Surveillance tests were routinely performed in a deliberate step-by-step manner by knowledgeable plant personnel. Mechanics and technicians almost always exhibited excellent skill of the craft. However, one violation was identified regarding the improper approval and installation of scaffolding near safety-related equipment.

### Engineering/Technical Support

Overall engineering and technical support of the plant was good. Onsite engineering continues to interface well with corporate. By completing a Safety System Self-Assessment (SSSA) of the Control Room Emergency Ventilation and Post Accident Sampling Systems the licensee fulfilled their commitment to the NRC (made 5 years ago) to conduct detailed self-assessments of 13 critical safety systems. The SSSA program has been extremely valuable in revalidating the current FNP design basis; and ensuring consistency between design criteria and plant procedures and drawings. One of the SSSA findings regarding uncalibrated control room pressurization unit humidistats was identified as an unresolved item.

### Plant Support

Health physics (HP) personnel provided good support of Unit 1 and 2 steady-state operations. Extensive dose reduction efforts were evident by HP in preparations for Unit 1 refueling outage. Initial containment surveys/inspections immediately after the Unit 1 shutdown were well controlled. HP management continued to proactively inform the resident staff of ongoing radiological issues. Security personnel were consistently alert and implemented the site's security plan in an appropriate manner. Personnel entry into the protected area was well-controlled. Fire protection features were adequately maintained and compensatory measures (i.e., fire watches) were properly implemented. The annual "offsite response" fire drill was a realistic and challenging exercise of onsite and offsite fire fighting capability; local command and control of the fire brigade by the responsible operations shift foreman was excellent. The emergency planning drill of crew #2 was a good training exercise that successfully demonstrated licensee emergency response capabilities.

## REPORT DETAILS

### 1. PERSONS CONTACTED

#### Southern Nuclear Operating Company Employees:

- \*W. Bayne, Chemistry/Environmental Superintendent
- C. Buck, Technical Manager
- \*R. Coleman, Maintenance Manager
- \*P. Crone, Operations Manager
- \*L. Enfinger, Administrative Manager
- H. Gariand, Mechanical Maintenance Superintendent
- \*R. Hill, General Manager - Farley Nuclear Plant
- C. Hillman, Security Manager
- R. Johnson, Instrumentation and Controls Superintendent
- J. Kale, Maintenance Engineering Support Group Supervisor
- \*J. McGowan, Safety Audit and Engineering Review [Corporate] Manager
- M. Mitchell, Health Physics Superintendent
- R. Monk, Engineering Support Supervisor - Equipment Evaluation
- \*C. Nesbitt, Assistant General Manager - Plant Support
- J. Odom, Superintendent Unit 1 Operations
- J. Powell, Superintendent Unit 2 Operations
- \*L. Stinson, Assistant General Manager - Plant Operations
- \*J. Thomas, Engineering Support Manager
- W. Warren, Engineering Support Supervisor - Performance Review
- \*G. Waymire, Safety Audit and Engineering Review Site Supervisor
- P. Webb, Technical Training Supervisor
- \*L. Williams, Training/Emergency Preparedness Manager
- \*B. Yance, Plant Modifications and Design Manager

#### NRC Personnel:

- \*T. Ross, Senior Resident Inspector
- M. Scott, Resident Inspector
- \*S. Tingen, Project Engineer

\*Attended the exit interview

Other licensee employees contacted included, HP, operations, technical, engineering, security, maintenance, I&C, and administrative personnel.

Acronyms used throughout this report are listed in the last paragraph.

### 2. PLANT STATUS AND ACTIVITIES

#### a. Unit 1 and 2 Status:

Unit 1 began the reporting period at 100 percent power. On August 19, the unit began a power coastdown due to the depleted fuel. Unit 1 was shutdown from 75 percent power on September 16 for its 13th refueling outage.

Unit 2 began and ended the reporting period at 100 percent power, except for a brief scheduled down power to 15% during the weekend of August 11 to reduce SG sodium levels.

b. Other NRC Inspections/Meetings:

During the week of August 21, P. Hopkins, a Vogtle Resident Inspector, spent a week onsite conducting routine inspections of site activities.

3. OPERATIONS

a. Plant Operations (71707)

1) Routine Plant and Facility Tours

Tours of FNP facilities were performed to verify that operating license and regulatory requirements were being met. In general, inspectors looked for indications of plant degradation, improper tagouts, incorrect operation, and improper system alignment. Tours were performed on both dayshift and backshifts to ensure conduct of plant Operations and Security remained at acceptable levels.

The inspection staff reviewed various logs, reports, and tagouts and compared them with actual plant conditions. The staff also monitored CR demeanor, staffing, access, turnovers and operator performance during routine and transient operations. Annunciator status and alarms were verified.

Limited walkdowns of accessible portions of safety-related structures, systems and components were also performed in the following specific areas:

- a. Unit 1 Main Steam Valve Room - MSIVs and MSSVs
- b. Units 1 & 2 Cable Spreading Rooms
- c. Units 1 & 2 Hot Shutdown Panels
- d. Unit 1 Service/Instrument Air Compressors
- e. Units 1 & 2 EDGs 1-2A, 1B, 2B, 1C and 2C
- f. Units 1 & 2 SFP areas and heat exchanger rooms
- g. Unit 1 RWST
- h. Unit 2 Charging (HHSI) pump rooms
- i. Unit 1 TDAFW and MDAFW pump rooms
- j. Units 1 & 2 SWIS
- k. Unit 2 Penetration Room Filtration room
- l. Unit 1 CCW pumps and heat exchangers space
- m. Unit 1 RHR (LHSI) pump and heat exchanger rooms
- n. Unit 1 CS pump rooms

- o. Units 1 & 2 piping penetration rooms (100 and 121 ft. elev.)
- p. Unit 1 Containment
- q. CAS and SAS

Breaker/switch positions and valve line-ups for safety-related systems were verified, both locally and in the CR, for consistency with operability requirements. MCB annunciators for both units were frequently observed to be in a blackboard condition. Only a few MCB deficiencies were noted and these were actively tracked. In general, equipment material conditions and housekeeping on both units ranged from good to average. The Unit 1 CCW pump and heat exchanger spaces looked extremely poor during heat exchanger ECT due to excessive water and dirt on the floor. Preparations for UIRF13 were obvious during this inspection period (e.g., equipment and material staging, scaffolding, additional workers, debris, etc.). The inspectors identified a number of minor equipment condition problems, including small leaks on the 1B CCW heat exchanger SW inlet drain valve (Q1P16V2573) and on the manual SW discharge isolation valve to the 1C CCW heat exchanger (Q1P16V007C). These problems were reported to the on-shift SS and/or maintenance management.

On September 16, the resident inspectors and HP manager toured the Unit 1 Containment shortly after it was shutdown for UIRF13. Overall interior conditions looked very good. There were a few minor leaks, but nothing inside containment indicated any significant damage or degradation. The few minor RCS and accumulator leaks identified were discussed with the Maintenance Manager who referred them to the Planning department for resolution this outage.

## 2) Plant Tagout Orders

The following tagouts/clearances were reviewed, and verified in the field, by the inspectors and determined to be properly implemented:

- Tagorder #95-3034-1; 1B EDG Outage Work
- Tagorder #95-2735-1; 1C SG FT-467

## 3) Technical Specification LCO Compliance

Selected TS LCO status sheets were reviewed on a regular basis in order to confirm that entries into action areas were recognized, tracked, and in compliance. No problems were identified.

Unit 2 Containment High Range Monitor (R-27A) was declared inoperable several times during the month of August (beginning on the 6th) due to spiking problems. In each case operators appropriately documented entry into the Action statement of LCO 3.3.3.1. Because of the intermittent nature of the R-27A failure mode, plant I&C personnel had an extremely difficult time identifying a root cause in order to make necessary repairs. This situation continued to persist long enough that the licensee was required to issue a special report to the NRC pursuant to item (2) of Action statement 27a of TS Table 3.3-6. An inspector reviewed the special report and confirmed that it provided the prescribed information. R-27A was ultimately repaired (loose containment penetration electrical connection) and returned to service on September 9 with no subsequent indications of spiking.

#### 4) Discharge of Liquid Radwaste From #1 Waste Monitor Tank

On September 5, an inspector observed the routine discharge of liquid radwaste to the Chattahoochee River from the #1 WMT by a SO in accordance with Appendix 1 of FNP-1-SOP-50.1, "... Liquid Waste Release From Waste Monitor Tank". The inspector reviewed the applicable LWR Permit #950792.011.159L. A total of 3892 gallons was released at a rate of 42 gpm into the SW discharge flow stream of about 30,000 gpm. The maximum allowed release rate (i.e., 50 gpm) and minimum allowed SW dilution flow rate (i.e., 20,000 gpm) were met throughout this evolution. Process monitor RE-18 was verified to be in service and properly set to ensure that the discharge of liquid radwaste did not exceed radiological release limits. The SO was in continuous communication with the control room; the entire evolution went very smoothly.

#### b. Effectiveness of Licensee Control in Identifying, Resolving, and Preventing Problems (40500)

The inspectors scanned all FNPIRs initiated during the inspection period to ensure that plant incidents that effect or could potentially effect safety were properly identified, documented and processed IAW FNP-0-AP-30, "Preparation and Processing of Incident Reports ...". Furthermore, the inspectors routinely reviewed completed incident reports. These reviews were performed to determine licensee's effectiveness in: 1) identifying/ describing problems; 2) elevating problems to the proper level of management; 3) problem/root-cause determination and/or analysis; 4) assessing operability and reportability; 5) developing appropriate corrective actions and 6) evaluating cause/corrective action scope for generic implications. The inspectors did not identify any significant findings regarding implementation of the incident report process.

## c. Operations Followup (92901)

- 1) (Closed) LER 50-364/94-003; Unit 2 Reactor Trip of December 18, 1994 Due to Turbine Control System Intermittent Failure

An inspector confirmed by review of records and personnel interviews that the licensee completed the immediate and planned corrective actions committed to by this LER. Onsite inspector response to this event and verification of initial licensee corrective actions are documented in IR 50-348, 364/94-31 (paragraph 3.b.1). This LER is considered closed.

- 2) (Closed) LER 50-364/94-004; Unit 2 Reactor Trip of December 25, 1994 Due to a Loss of Turbine DEHC Overspeed Protection

An inspector confirmed by review of records and personnel interviews that the licensee completed the immediate and planned corrective actions committed to by this LER. Onsite inspector response to this event and verification of initial licensee corrective actions are documented in IR 50-348, 364/94-31 (paragraph 3.b.2). However, as more information was learned from an almost identical Unit 1 reactor trip on January 13, 1995 (see below), additional long term corrective actions in the form of modifications to the Unit 2 DEHC system were implemented during the last week of January 1995. The shutdown of Unit 2 to implement the same modifications as Unit 1 is documented in IR 50-348, 364/95-03 (paragraph 3.b.2). The inspector also confirmed the completion of the Unit 2 DEHC modifications. This LER is considered closed.

- 3) (Closed) LER 50-348/95-001; Unit 1 Reactor Trip of January 13, 1995 Due to a Loss of Turbine DEHC Overspeed Protection.

This Unit 1 reactor trip was the third to occur at FNP in less than a month due to DEHC system problems associated with internal power supply instabilities. Vendor and licensee root cause investigations resulted in recommendations to modify the Unit 1 and 2 DEHC system. Design change packages were developed and implemented to reduce the vulnerability of the DEHC OPC processors and their internal power supplies to minor voltage fluctuations. As documented in IR 50-348, 364/95-03 (paragraph 3.b.1), the inspectors responded to the site following the trip and later observed portions of the Unit 1 DEHC system modifications.

An inspector confirmed that all licensee actions detailed in the subject LER were completed, in particular the

modifications made to the Units 1 and 2 main turbine generator DEHC systems. As documented in IR 50-348, 364/95-03 (paragraph 3.c.1), the licensee has also established a special DEHC review team to reassess the current system design and propose additional modifications to improve reliability. This LER is considered closed.

Operations personnel and management continued to perform well in maintaining steady-state operations of Units 1 and 2. Operators remained attentive to changing plant conditions and were well-versed on plant status and ongoing activities. On September 15, Unit 1 was shutdown without incident for its 13th refueling outage.

Within the areas inspected, no violations or deviations were identified.

#### 4. MAINTENANCE/SURVEILLANCE

##### a. Maintenance Observations (62703)

Inspectors observed and reviewed portions of various licensee corrective and preventative maintenance activities, to determine conformance with procedures, work instructions and regulatory requirements. Work orders were also evaluated to determine status of outstanding jobs and to ensure that proper priority was assigned to safety-related equipment. The following maintenance activities were observed.

##### 1) Scaffolding Improperly Installed Over Safety-related Equipment

During preparations for the 13th Unit 1 refueling outage, scaffolds were improperly installed over a number of Unit 1 safety-related systems while the unit was at full power. In addition, Operations was routinely approving scaffolds over redundant trains of critical safety systems. Furthermore, no safety evaluations were conducted to assess the impact on the seismic qualification of these safety systems.

During routine tours of the Unit 1 auxiliary building, an inspector identified a number of scaffolds over safety-related equipment (i.e., Train A and B RHR heat exchangers, 1B RHR pump, 1A Charging pump, and 1A CS pump) that were not constructed pursuant to the requirements of FNP-0-GMP-60, Revision 13, "General Guidelines And Precautions For Erecting Scaffolding." More specifically, these scaffolds did not conform with the seismic bracing provisions of Section 7.4.6.1 that states "a minimum separation of six inches is required between free standing scaffolding and nuclear safety related plant equipment or not in contact when braced in all horizontal directions." The inspector also reviewed the approved scaffold permits and talked with



the licensed SROs (i.e., SFO) responsible for approving these permits that allowed construction of scaffolding in safety-related areas. Afterwards, it was clear to the inspector that the SFOs were unfamiliar with the requirements of GMP-60, Section 7.1.4 which states the SFO should "ensure where possible that scaffolds are not erected simultaneously directly over redundant pumps/components in a system." At the time of the inspectors review, SFOs had approved scaffolds over redundant trains of RHR, Charging, and CS. However, actual scaffolding had only been installed over redundant trains of the RHR system.

Aside from failing to comply with the requirements of GMP-60 for approving and installing scaffolds near safety-related equipment, the inspector questioned plant management on the adequacy of GMP-60 for ensuring the seismic qualification of safety systems is not adversely affected. Revision 13 of GMP-60 was silent on the necessity of conducting any kind of safety evaluation regarding seismic adequacy of the scaffolding or its impact on safety-related equipment during a seismic event.

The inspector met with responsible plant management on several occasions to discuss the concerns. As a result of these discussions, plant management immediately suspended all construction of scaffolds near safety-related equipment, conducted detailed walkdowns of existing scaffolds, modified or removed scaffolds as needed, performed safety evaluations for certain scaffolds (e.g., CCW system), coached/trained responsible Operations and contractor craftsmen, and initiated an comprehensive review of their scaffolding control program with intentions to revise GMP-60.

Failure to conform with the provisions of GMP-60 for approving and installing scaffolds near safety-related equipment is considered a violation of procedural requirements prescribed by TS 6.8.1 which will be identified as VIO 50-348/95-16-01, Improperly Installed Scaffolds Over Safety-Related Equipment. This is the third violation involving scaffolds installed near safety-related equipment during the past two years. Although these violations are similar they are not considered repeat violations.

- 2) WA 435886 and 435882; Unit 1 Main Steam Safety Valve Lift In Situ Tests at Power

An inspector examined the test instrumentation and test rig attachment, and observed actual MSSV lift testing performed by a contractor of two Unit 1 MSSVs (i.e., Q1N11V011E and 12D). During the test, Unit 1 was at about 80 percent power and 830 psig actual main steam line pressure. This TS required testing was performed satisfactorily. To ensure

test result continuity, the licensee employed the contract test personnel that performed the U2RF10 MSSV testing. The results for the five [normal sample size] valves tested were within the TS allowed acceptance criteria plus/minus three percent. However, per TS, three of the five MSSVs required adjustment because they lifted at pressures greater than plus/minus one percent of the prescribed set points.

3) WA 68567; 1B Component Cooling Water Room Cooler Replacement

An inspector observed portions of the removal and replacement of the original 1B CCW Room Cooler with a new cooler. The maintenance evolution for replacing this cooler was begun four days prior to UIRF13, while Unit 1 was still at power and both trains of CCW were required to be operable. The licensee documented its safety evaluation for performing this work in REA 95-0873 dated September 1, 1995. Contractors performed their work IAW approved work instructions. The large, bulky cooler components were rigged in and out of tight work areas with evident skill and care to ensure operating CCW equipment was not adversely affected.

4) WO 530530; 1C SW Pump Work

The Unit 1 swing 1C SW pump had been selected for additional specialized flow testing (see paragraph 4.b.1 of IR 50-348, 364/95-14). During a pre-test examination, the licensee disconnected the lube water line to check its suitability as a dye flow injection point. The line appeared to be partially occluded and then would not re-tighten as expected. A WO was written to investigate and repair the problem. The inspector observed a significant portion of this work.

The pump was removed and laid down by the SWIS for inspection and possible repair. Carbon steel parts on the lube water line exhibited some corrosion. A union and a nipple on the lube line had been especially attacked by the corrosion. The pump vendor had provided these parts with the pump. Subsequently, the licensee replaced the carbon steel parts with vendor approved corrosion resistant parts. All work was IAW local instructions. The pump later passed its normal surveillance test.

5) WO 512926; EDG 1-2A Troubleshooting

On September 4, the swing EDG 1-2A tripped on loss of excitation during a routine monthly surveillance test IAW STP-80.1. Loss of excitation is a non-essential protective feature that is blocked during an emergency start. An

inspector met with the SNC corporate engineer sent to investigate the problem and reviewed associated work instructions used to control the EDG troubleshooting activities. A vendor representative discovered that a certain jumper was missing in the EDG control cabinet that should have been installed during initial construction as part of the original design. The licensee subsequently determined that all five EDGs were missing this particular jumper due to a drawing translation error between the control system supplier and the vendor. The jumper was intended as a design enhancement to prevent spurious EDG trips at low load due to fluctuations in excitation voltage control. By the end of the inspection period the licensee was in the process of installing the missing jumper on all FNP EDGs and testing each one. Furthermore, the licensee was also continuing to pursue with the vendor/supplier the need for a 10 CFR Part 21 or other industry notification.

b. Surveillance Observation (61726)

Inspectors witnessed surveillance activities performed on safety-related systems/components in order to verify that activities were performed IAW licensee procedures, FNP TSs and NRC regulatory requirements. Portions of the following surveillances were observed:

1) FNP-0-ETP-3610 and 3616; Unit 1 Flux Map

On August 24, an inspector observed the conduct of a routine monthly incore flux map of Unit 1 IAW ETP-3610, "Determination of Moveable Detector Operating Voltages," and ETP-3616, "Performing Monthly Surveillance Flux Map Data Collection For STP-108, 109, and 121." The responsible nuclear engineer was very familiar with the multiple procedures and data sheets involved. He demonstrated a high degree of proficiency in operating the moveable incore detector system. The test procedures were followed in a step-by-step manner and all required data was taken.

2) FNP-0-STP-80.1; EDG 1-2A Operability Test

On September 5, an inspector observed the running of EDG 1-2A at full load from the control room and in the EDC building. The inspector also reviewed the STP-80.1 test data to confirm that the single air header starts of EDG 1-2A met established acceptance criteria. The diesel was being run as part of the troubleshooting described in paragraph 4.a.5 above. EDG 1-2A ran well; plant operators closely followed the step-by-step instructions of STP-80.1 and FNP-0-SOP-38.0, "Diesel Generators." The licensee ran EDG 1-2A several times but was unable to duplicate the prior failure.

- 3) FNP-1-STP-1.0; Operations Daily and Shift Surveillance Requirements

An inspector reviewed the completed Unit 1 STP-1.0 data sheets for dayshift on September 5. All applicable data was appropriately logged and appeared to be accurate.

- 4) 1-STP-2.6; 1A Boric Acid Transfer Pump Quarterly Inservice Test

An inspector observed the 1A BAT pump and valve alignment, test run, and return to service IAW STP-2.6. All plant personnel and equipment performed satisfactorily.

d. Followup Maintenance (92902)

- 1) (Closed) LER 50-348/94-004, Valve Actuator Spacer Bolts Found to be of Incorrect Material; and IFI 50-348, 364/94-018-01, Valve Actuator Bolt Failure

As documented in IR 50-348, 364/94-18 (paragraph 6.a), an inspector verified the licensee's short-term corrective actions for ensuring the integrity of the substandard valve actuator spacer bolts. Another inspector independently confirmed that the valve actuator spacer bolts have since been replaced on all Unit 2 MSIV bypass valves and both TDAFW steam admission valves. On Unit 1, only the bolts of the 1A MSIV bypass valve and one TDAFW steam admission valve were replaced. The spacer bolts for the remaining 11 Unit 1 MSIV bypass valves and TDAFW steam admission valve actuators are scheduled to be replaced during UIRF13. This LER and IFI are considered closed.

- 2) (Closed) LER 50-348/95-002, Missed Surveillance For Inoperable Axial Flux Difference Monitor Alarm and VIO 50-348/95-03-03, Failure to Perform AFD Surveillance Requirements.

By letter dated April 6, 1995, the licensee responded to VIO 95-03-03. The corrective actions described in this letter were also mentioned in LER 50-348/95-002. By record review and personnel interviews, an inspector confirmed these corrective actions have been implemented. This LER and VIO are considered closed.

Maintenance and surveillance personnel consistently performed assigned activities in accordance with work orders and applicable procedures. Personnel continued to demonstrate familiarity with administrative procedures and radiological controls. Surveillance tests were routinely

performed in a deliberate step-by-step manner by knowledgeable plant personnel. Mechanics and technicians almost always exhibited excellent skill of the craft.

Within the areas inspected, one violation was identified.

## 5. ENGINEERING AND TECHNICAL SUPPORT

### Onsite Engineering (37551)

Inspectors periodically inspected onsite engineering/technical support activities (e.g., design control, configuration management, system performance monitoring, plant modification, etc.). Effectiveness of onsite engineering and technical group support of licensee efforts to identify, resolve and prevent incidents or problems were also inspected.

#### a. Safety System Self-Assessment of Control Room Emergency Ventilation and Post Accident Sampling Systems

During the month of August, a team of SNC Corporate engineers and contractors conducted an independent SSFI-type assessment of the CREVS and PASS. This SSSA completes the licensee's commitment to the NRC (made 5 years ago) to conduct detailed self-assessments of 13 critical safety systems. The SSSA program has been extremely valuable in revalidating the current FNP design basis; and ensuring consistency between design criteria and plant procedures and drawings. This SSSA team spent two weeks onsite and three weeks offsite and identified a number of significant findings that were formally presented to plant management in an exit meeting on August 25. This exit meeting was also attended by an inspector. One of the SSSA's most safety significant findings included the discovery that the control room pressurization unit humidistats for controlling heaters upstream of the charcoal filters have not been calibrated since original installation.

The SSSA team first communicated their concern regarding the train A and B control room pressurization unit humidistats to plant personnel on August 9. By August 11, considering the indeterminate state of these humidistats, the heater switches of the pressurization units were placed in the "test" position to ensure they would energize. On August 17, a preliminary evaluation by the licensee concluded that the postulated accident dose to control room operators if the humidistats failed completely could exceed the GDC-19 limit of 30 rem thyroid specified in FSAR section 15.4.1.8.3. On September 8, the Train A humidistat was tested and determined to be incapable of performing its safety function. By the end of the inspection period, the licensee was still in the process of removing the Train B humidistat to be bench tested.

Without humidity control, the pressurization system charcoal filter efficiency during an accident could be reduced well below the TS limit and safety analysis assumptions resulting in control room operator doses above those approved in the FNP licensing basis. For the interim, the control room pressurization units appear to be in configuration that allows them to fulfill their intended safety function while the licensee continues its investigation. Until the licensee can complete its testing of the train B humidistat, this SSSA finding is identified as URI 50-348, 364/95-16-02, "Control Room Pressurization System Humidity Control System Failure."

b. Equipment Out-Of-Service Risk Monitor

On August 25, an inspector attended an onsite presentation of the EOOS Risk Monitor for qualitatively and quantitatively assessing the relative risk associated with on-line maintenance and/or changing plant conditions. The EOOS Risk Monitor is a personal computer based risk assessment tool tailored to plant specific equipment data bases and PRA models. The licensee has assigned a high priority to the task of selecting and installing a suitable risk monitor system at FNP. Serious consideration is being given to the EOOS Risk Monitor system, along with a couple of others. A schedule has been developed that indicates a risk monitor system will be installed by April 12, 1996. This schedule appears ambitious.

Overall engineering and technical support of the plant was very good. Onsite engineering continues to interface well with corporate. By completing an SSSA of CREVS and PASS the licensee fulfilled their commitment to the NRC (made 5 years ago) to conduct detailed self-assessments of 13 critical safety systems. The SSSA program has been valuable in revalidating the current FNP design basis; and ensuring consistency between design criteria and plant procedures and drawings.

Within the areas inspected, one URI was identified.

6. PLANT SUPPORT (71750)

a. Routine Inspection of Fire Protection Activities

During normal tours, inspectors routinely examined aspects of the plant FP Program (e.g., transient fire loads, flammable materials storage, fire brigade readiness, ignition source/risk reduction efforts & FP features). The inspectors paid particular attention to the use of continuous fire watches during welding and grinding activities in preparation for UIRF13. No findings were identified.

Annual Offsite Response Fire Drill - On September 7, an inspector observed the licensee's annual "offsite response" fire drill. For this particular drill, a large scale fire of the #2 Unit 2 MPT was

simulated to have occurred in the low voltage switchyard next to the turbine building. The onsite fire brigade responded to the event fully equipped and in a timely manner. Local command and control of the fire brigade by the responsible operations shift foreman was excellent. The SS declared an unusual event and requested support from the Dothan Fire Department to combat the fire. Offsite support from Dothan also arrived in a timely manner; and after being appraised of the situation, promptly and smoothly integrated itself with the onsite fire brigade. During the drill, onsite and offsite drill participants deployed their fire fighting equipment wherever possible. The drill scenario itself was well planned, challenging and suitably realistic to adequately verify the fire fighting capabilities of the onsite fire brigade and offsite response. Overall, the drill appeared to be very successful. The inspector only identified two minor observations - 1) Security did not limit access of non-essential personnel to the south end of the low voltage switchyard or adjacent street, and 2) No drill announcement was made to evacuate non-essential personnel from the low voltage switchyard. These findings were discussed with the drill director.

b. Routine Security Inspection Activities

During routine inspection activities, inspectors verified that security program plans were being properly implemented. This was evidenced by: proper display of picture badges; appropriate key carding of vital area doors; adequate stationing/tours of security personnel; proper searching of packages/personnel at the Primary Access Point; and adequacy of compensatory measures during disablement of vital area barriers. Licensee activities observed during the inspection period appeared to be adequate to ensure proper plant physical protection. Guards were alert and particularly attentive to open doors. They responded promptly to door alarms. Posted positions were well manned with frequent relief.

d. Routine Health Physics Inspection Activities

Inspectors routinely examined postings and surveys of radiological areas and labelling of radioactive materials in the RCA. Work activities of plant personnel in the RCA were observed to verify their adherence to established administrative guidelines for radiation protection and ALARA work practices. Effluent and environmental radiation monitors were monitored on a routine basis for any significant changes in radiological conditions or indications of uncontrolled releases. No significant findings were identified. HP technicians maintained positive control over the RCA and provided good support of Unit 1 and 2 steady-state operations. Extensive preparations for U1RF13 by HP were evident. The 175 Rem dose goal for U1RF13 is a 20 Rem reduction from the previous U2RF10 goal that the plant met earlier this year. HP in the past has consistently risen to the challenge in accomplishing

ever demanding outage dose reduction goals. The HP manager continues to actively inform the resident inspectors of radiological incidents, personnel contaminations, and other related-events of interest.

e. Emergency Planning

On September 7, an inspector observed and participated in a scheduled EP drill of crew #2 in the TSC and OSC. The drill began with a large simulated fire in the Unit 2 low voltage switchyard (see paragraph 6.a above) which resulted in the declaration of an Unusual Event and shutdown of Unit 2. Whereupon, the drill shifted to Unit 1 to play the accident unit. Subsequent drill scenario events over approximately three hours evolved into the declaration of a General Area emergency with associated uncontrolled radiological releases beyond the site boundary. During the drill, the TSC, EOF, NMC, and EOC were fully manned. State and local EMA officials did not participate in the drill. Overall performance by the TSC and OSC plant staff was good. The drill scenario itself was reasonably challenging and more than sufficient to exercise and evaluate the performance of crew #2. However, the inspector noticed that procedures were not clear regarding the establishment of a continuous line of communication to the NRC during an emergency. This concern was discussed with the EP coordinator.

Health physics personnel provided good support of Unit 1 and 2 steady-state operations. Extensive dose reduction efforts were evident by HP in preparations for UIRF13. Initial containment surveys/inspections immediately after the Unit 1 shutdown were well controlled. HP management continued to proactively inform the resident staff of ongoing radiological issues. Security personnel were consistently alert and implemented the site's security plan in an appropriate manner. Personnel entry into the protected area was well-controlled. Fire protection features were adequately maintained and compensatory measures (i.e., fire watches) were properly implemented. The annual "offsite response" fire drill was a realistic and challenging exercise of onsite and offsite fire fighting capability; local command and control of the fire brigade by the responsible operations shift foreman was excellent. The emergency planning drill of crew #2 was a good training exercise that successfully demonstrated licensee emergency response capabilities.

Within the areas inspected, no violations were identified.

7. EXIT INTERVIEW

On September 21, 1995, the inspectors met with the licensee representatives identified in paragraph 1. During this meeting the inspectors summarized the scope and findings of the inspection as



detailed in this report. SNC management at FNP acknowledged these findings and did not identify as proprietary any material provided to or reviewed by the inspectors nor did they express any dissenting comments.

<u>ITEM NUMBER</u>	<u>DESCRIPTION AND REFERENCE</u>
VIO 50-348/95-16-01 (Open)	Improperly Installed Scaffolds Over Safety-Related Equipment
URI 50-348, 364/95-16-02 (Open)	Control Room Pressurization System; Humidity Control System Failure
LER 50-364/94-003 (Closed)	Unit 2 Reactor Trip of December 18, 1994 Due to Turbine Control System Intermittent Failure
LER 50-364/94-004 (Closed)	Unit 2 Reactor Trip of December 25, 1994 Due to a Loss of Turbine DEHC Overspeed Protection
LER 50-348/95-001 (Closed)	Unit 1 Reactor Trip of January 13, 1995 Due to a Loss of Turbine DEHC Overspeed Protection.
LER 50-348/94-004 (Closed)	Value Actuator Spacer Bolts Found to be of Incorrect Material
IFI 50-348, 364/94-18-01 (Closed)	Valve Actuator Bolt Failure
LER 50-348/95-002 (Closed)	Missed Surveillance For Inoperable Axial Flux Difference Monitor Alarm
VIO 50-348/95-03-03 (Closed)	Failure to Perform AFD Surveillance Requirements

#### 8. ACRONYMS AND ABBREVIATIONS

AFD	-	Axial Flux Difference
AP	-	Administrative Procedure
BAT	-	Boric Acid Transfer
CAS	-	Central Alarm Station
CCW	-	Component Cooling Water
CFR	-	Code of Federal Regulations
CR	-	Control Room
CREVS	-	Control Room Emergency Ventilation System
CS	-	Containment Spray

DEHC	-	Digital Electro-Hydraulic Control (MTG control)
ECT	-	Eddy-Current Testing
EDG	-	Emergency Diesel Generator
EMA	-	Emergency Management Agency
ECC	-	Emergency Operations Center
EOF	-	Emergency Operations Facility
EOOS	-	Equipment Out-Of-Service
EP	-	Emergency Planning
ETP	-	Engineering Test Procedure
FNP	-	Farley Nuclear Plant
FNPIR	-	Farley Nuclear Plant Incident Report
FP	-	Fire Protection
FSAR	-	Final Safety Analysis Report
FT	-	Flow Transmitter
GDC	-	General Design Criteria
GMP	-	General Maintenance Procedure
gpm	-	Gallons per minute
HHSI	-	High-Head Safety Injection
HP	-	Health Physics
I&C	-	Instrumentation and Control Department
IAW	-	In Accordance With
IFI	-	Inspector Followup Item
IR	-	Inspection Report
LCO	-	Limiting Condition for Operation
LER	-	Licensee Evaluation Report
LHSI	-	Low-Head Safety Injection
LWR	-	Liquid Waste Release
MCB	-	Main Control Board
MDAFW	-	Motor-Driven Auxiliary Feedwater
MPT	-	Main Power Transformer
MSIV	-	Main Steam Isolation Valve
MSSV	-	Main Steam Safety Valve
NMC	-	News Media Center
NRC	-	Nuclear Regulatory Commission
OPC	-	Overspeed Protection Controller
OSC	-	Operations Support Center
PASS	-	Post-Accident Sampling System
PRA	-	Probabilistic Risk Analysis
RCA	-	Radiological Control Area
RCS	-	Reactor Coolant System
RE	-	Radiological Effluent
RHR	-	Residual Heat Removal
RWST	-	Refueling Water Storage Tank
SAS	-	Secondary Alarm Station
SFO	-	Shift Foreman - Operating
SFP	-	Spent Fuel Pool
SG	-	Steam Generator
SGFP	-	Steam Generator Feed Pump
SNC	-	Southern Nuclear Operating Company
SO	-	Systems Operator
SOP	-	System Operating Procedure
SRO	-	Senior Reactor Operator

SS	-	Shift Supervisor
SSFI	-	Safety System Functional Inspection
SSSA	-	Safety System Self-Assessment
STP	-	Surveillance Test Procedure
SW	-	Service Water
SWIS	-	Service Water Intake Structure
TDAFW	-	Turbine-Driven Auxiliary Feedwater
TS	-	Technical Specification
TSC	-	Technical Support Center
U1RF13	-	Unit 1 Thirteenth Refueling Outage
U2RF10	-	Unit 2 Tenth Refueling Outage
URI	-	Unresolved Item
VIO	-	Notice of Violation
WMT	-	Waste Monitor Tank
WA	-	Work Authorization
WO	-	Work Order