



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

Report Nos.: 50-348/92-04 and 50-364/92-04

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 1 and 2

Inspection Conducted: January 31 through March 9, 1992

Inspection at Farley site near Dothan, Alabama

Inspectors: FOR R. W. Wright
 F. Maxwell, Senior Resident Inspector

3/18/92
 Date Signed

FOR R. W. Wright
 M. J. Morgan, Resident Inspector

3/18/92
 Date Signed

Approved by: W. S. Cantrell
 F. S. Cantrell, Section Chief
 Division of Reactor Projects

3/18/92
 Date Signed

SUMMARY

Scope:

This routine onsite inspection involved review of operational safety verifications, emergency preparedness, fire protection, monthly surveillance and maintenance observations, review of previous inspection findings, review of periodic and special reports, refueling/outage preparations and a continuing evaluation of licensee self-assessment capability. Deep backshift inspections were conducted February 17 and March 7, 1992.

Results:

Unit 1 operated at approximately 100 percent power for the reporting period. On February 13, the plant's health physics group analyzed material contained in three drums located near the site's landfill. The burial of the contents of these drums and other non-radioactive resins in this landfill are discussed in paragraph 2.b.(1). During the week March 2, the inspectors observed training of security personnel, paragraph 2.b.(4). On February 10, repairs were made to fire protection yard loop piping near the plant service water structure, paragraph 5. On February 18, an emergency response exercise was conducted

for personnel assigned to the TSC and on February 25, a plant-wide accountability exercise was performed, paragraph 6.

A review of recent plant incident reports 1-91-383, 1-91-394 and 1-92-12, revealed a continuing problem with diesel generator "1B" air start pilot valves, paragraph 4.a. On January 31, a Maintenance and Engineering Support Group (MESG) engineer, issued a memorandum to maintenance management, describing ongoing concerns with William Powell stainless steel gate valves, paragraph 4.b. On March 6, the inspectors attended a regularly scheduled quarterly meeting of the Nuclear Operations Review Board (NORB). The inspectors noted concerted efforts on the part of management to resolve key issues which required a higher degree of NORB attention, paragraph 11.

No violations or deviations were identified for this unit.

Unit 2 operated at approximately 100 percent power for most of the reporting period. However, on March 6, at about 11:07 p.m., during a planned shutdown for normal refueling outage number 8, the plant experienced an unplanned reactor trip, paragraph 2.b.(2). This outage is expected to last for about 63 days, paragraph 2.b (3). A non-cited violation involving incorrect storage of an incore detector was identified, paragraph 3.a. Another non-cited violation was identified involving the incorrect positioning of a test switch in the solid state protection system (paragraph 3.b). Refueling preparation activities have been performed during this inspection period for the current unit outage. Temporary Instruction (TI) 2515/103 was performed by the site resident inspectors, paragraph 8.

Except as noted, no violations or deviations were identified for this unit.

REPORT DETAILS

1. Licensee Employees Contacted

R. M. Coleman, Modification Manager
L. W. Enfinger, Administrative Manager
W. R. Bayne, Supervisor Safety Audit and Engineering Review
L. M. Stinson, Assistant General Manager - Plant Operations
D. N. Morey, General Manager - Farley Nuclear Plant
C. D. Nesbitt, Operations Manager
J. K. Osterholtz, Technical Manager
R. D. Hill, Assistant General Manager - Plant Support
J. J. Thomas, Maintenance Manager
L. S. Williams, Training Manager

Other licensee employees contacted included technicians, operations personnel, maintenance and I&C personnel, security force members, and office personnel.

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

Other Inspections or Meetings

February 3 - 7, Region II Operational Programs section personnel performed an inspection of recent reactor trips Inspection Report (IR) 50-348,364/92-03.

On February 6, a meeting was conducted at the NRC offices for NRR at Rockville, MD. This meeting was arranged by the Farley NRR Project Manager to allow for an interchange of information between Southern Nuclear Operating Company, Westinghouse, and NRC management. It addressed a potential amendment request for interim steam generator tube alternate plugging criteria.

The meeting was conducted in two parts: a morning and an afternoon session. The morning session was open to the general public but the afternoon was restricted only to those allowed access to Westinghouse "Proprietary" information.

February 10 - 14, Region II Radiological Effluents and Chemistry Section personnel performed a RCS comparative sampling and analysis inspection IR 50-348,364/92-05.

February 24 - 28, Region II Physical Security personnel conducted an inspection of the licensee's security program, IR 50-348,364/92-06.

February 24 - 28, Region II Emergency Preparedness (EP) Section personnel conducted an inspection of FNP's EP program IR 50-348, 364/92-07.

2. Operational Safety Verification (71707) and Evaluation of Licensee Self-Assessment (40500)

a. Plant Tours

The inspectors conducted routine plant tours during this inspection period, in accordance with guidance provided by NRC inspection procedure MC71707 to verify licensee requirements and commitments were being implemented. Inspection tours included review of documentation, interviews with plant personnel and an on-going evaluation and observation of site security.

The inspectors noted continued improvements in supervisory oversight and reduced use of overtime in meeting routine plant operation requirements. This reduction on dependance of overtime has occurred since the initiation the first of the year, of the new "sixth crew concept". Replacement of light bulbs was still needed in several areas of the plant. Transition of routine plant activities and management responsibilities from the former licensee, Alabama Power Company, to the new licensee, Southern Nuclear Operation Company, continues without any significant change in operations at the site.

b. Plant Events and Observations

(1) Burial of Non-radioactive Resins In The Site Landfill

On February 13, the resident inspectors and a Region II radiation protection group inspector examined the site landfill area for any evidence of radioactive material being buried in this "demolition waste only" landfill. At a nearby staging area for drum waste, the inspectors noted a higher than background but still low level reading of radioactivity being emitted from three of the drums awaiting burial. Site health physics personnel were notified and performed an isotopic analysis of the drums. All nuclides identified were of "natural origin" and posed no significant health hazard; however, it was noted in follow-up discussions with a site chemistry supervisor, that non-radioactive "slightly chromated" resins and charcoal from plant "Hittman-type" filter/demineralizers are routinely buried in this landfill.

A company inter-office letter notes that in 1988, Alabama Power sent samples of fresh resin and charcoal to an independent lab for testing of chromium retention and "leachability" characteristics. This EPA approved test revealed that less than 0.14 mg per liter chromium for the resin and less than 0.40 mg per liter for the charcoal, is retained which is well below the 5.0 mg per liter of chromium specified as being hazardous waste according to EPA 40 CFR Part 261.24 regulation. Follow up as appropriate will be by Region II Radiological Effluents and Chemistry personnel.

(2) Reactor Trip During Routine Shutdown - Unit 2

On March 6, at approximately 11:07 p.m., during the planned shutdown for refueling outage number 8, the plant experienced an unplanned reactor trip. Operations is currently evaluating the circumstances and conditions which existed when this trip occurred in an attempt to determine cause(s). The inspectors will conduct a follow-up of event.

(3) Scheduled Refueling Outage - Unit 2

On March 6, 1992, following the shutdown to begin it's eighth refueling outage the inspectors assessed the condition of valves and components in containment shortly following the shutdown. The following was noted:

- (a) Five RHR valves exhibited some packing and flange leakage
- (b) Several signs of leakage on the incore instrumentation high pressure line seals
- (c) Some oil spotting beneath pipe snubbers
- (d) Boron collection in the containment coolers
- (e) Letdown valves "459" and "460" exhibited signs of possible leakage or "spray"
- (f) Boron deposits noted in places along RHR piping, flanges and valves

In general, no abnormal or adverse conditions were visible in containment. There were no signs of boron deposits on either the reactor vessel head or vessel head bolts.

(4) Security Training

On March 2-3, the inspectors observed classroom and field training, for the site security force and observed members of the force while they were conducting weapon proficiency exams on the firing range. The following were noted:

- (a) The firing range was clean and neat and arranged with the necessary facilities needed for conducting safe and efficient weapons tests.
- (b) The weapons proficiency exams were well supervised and they were conducted in a safe and professional manner. The exams were administered in accordance with the controlling procedures. Those members who were examined demonstrated a high degree of enthusiasm about the training program and interest in doing their very best.

The results of inspections in this area indicate the program was effective with respect to meeting the safety objectives. No deviations or violations were identified in this area.

3. Monthly Surveillance Observation (61726)

The inspectors witnessed surveillance test activities performed on safety-related systems and components, in accordance with guidance contained in NRC inspection procedure MC61726, in order to verify that such activities were performed in accordance with facility procedures, NRC regulatory and technical specification requirements.

Portions of the following surveillance activities were observed:

- 1-STP-33.1A Safeguards Test Cabinet Train "A" Functional Test
- 2-STP-1.0 Operations Daily/Shift Surveillance Reqs Modes 1, 2, 3, 4
- 2-STP-80.1 Diesel Generator 2B Operability Test
- 2-STP-201.20 Pressurizer Level Loop Calibration and Functional Test

- a. Incore Detector "D" Not Placed Into a Stored Condition Following Completion of Flux Mapping - Unit 2

While reviewing recent plant incident reports, the inspectors noted in report IR 2-91-384, that on December 17, 1991, at about 1:00 p.m., Unit 2 incore detector "D" was left inserted in core location N7 following the completion of flux map data collection.

Engineering Test Procedure O-ETP-3616, Performing Monthly Surveillance Flux Maps, step 6.6.4.1, requires the detector be placed in "storage". Investigation by operations identified that the engineering personnel who performed the surveillance, did not properly verify the true position of detector "D" prior to informing operations that the test was complete and that the system could be restored to a normal deenergized, and tagged condition. The engineering personnel involved were informed of the problem and promptly returned detector "D" to a correctly stored condition. Plant staff evaluation of IR 2-91-384, noted that the lead engineer who conducted the surveillance had apparently neglected to place detector "D" into the "storage" switch position prior to declaring the test complete.

For permanent corrective action, procedure O-ETP-3616 has been revised to include a verification step to be signed by operations personnel prior to placing the system in a normal stored and deenergized condition. Also, engineering and operations personnel have been presented with the specifics of this incident report as part of ongoing training.

The inspectors were informed by plant health physics personnel that the length of time between discovery of the switch being in the improper position for storage and the time the "D" detector was properly stored was less than one hour. The inspectors noted that applicable health physics procedures for entering containment would have required health physics foreman's verification of proper positioning of all incore detectors prior to allowing any entry.

The improper storage of the incore detector is identified as a non-cited violation and will not be subject to enforcement action because the licensee's efforts in identifying and correcting the violation meet the criteria specified in Section V.G. of the Enforcement Policy. This item is identified as non-cited violation (NCV) 50-364/92-04-01, Unit 2 incore detector "D" not placed into a stored condition following completion of flux mapping.

b. Incorrect Positioning of Solid State Protection System (SSPS) Multiplexer Test Switch - Unit 2

While reviewing recent plant incident reports, the inspectors noted in report IR 2-92-23, that on February 7, 1992, at about 12:05 a.m., during the performance of FNP- 2-STP-201.20, Pressurizer Level Loop

Calibration and Functional Test, I&C personnel found the train "A" multiplexer test switch in the "A + B" test position rather than the called-for "normal" position. The shift supervisor was informed of this mispositioning and, after review of facility/plant maintenance documentation and the vendor manual for the system, he instructed I&C personnel to reposition the switch and continue with the test.

A review of the vendor manual for the SSPS multiplexer revealed that the switch being in the "A + B" position does not affect the ability of the train to provide plant protection.

A review of operations logs revealed that during earlier testing, another I&C technician was working in the cabinet on February 5, 1992. This man stated that he did not incorrectly position this switch; however, plant management stated that this appears to be the most likely cause of the mis-positioned switch since he was the only one in the cabinet prior to discovery of the problem.

As a corrective action, plant management is changing this and other I&C procedures to require verification of correct switch positions by the I&C foreman, prior to closure of SSPS cabinet doors.

A similar mispositioning problem occurred June 3, 1991, during surveillance testing of the overall SSPS, (surveillance test FNP-2-STP-33.0A). As noted in inspection report 50-348,364/91-12 and plant incident report 2-91-171, the block inhibit test switch was found in the "Inhibit Blocks" rather than the "Blocks Not Inhibited" position; however, the true problem with that surveillance was an SSPS card failure, not with the incorrect positioning of the switch. A review of the SSPS vendor manual at that time revealed that the block inhibit test switch being in an "other than called for" position did not affect the ability of the train to provide plant protection.

The incorrect positioning of the train "A" SSPS multiplexer test switch is identified as a non-cited violation. It will not be subject to enforcement action because the licensee's efforts in identifying and correcting the violation meet the criteria specified in Section V.G. of the Enforcement Policy. This item is identified as MCV 50-364/92-04-02. Incorrect positioning of the Unit 2 train "A" solid state protection system multiplexer test switch.

Except as noted, no deviations or other violations were identified in this area. The results of inspections in the surveillance area indicate that both operations and maintenance personnel conducted the above tests in accordance with applicable procedures.

4. Monthly Maintenance Observation (62703)

The inspectors reviewed various licensee preventative and corrective maintenance activities, in accordance with guidance provided by NRC inspection procedure MC62703, to determine conformance with facility procedures, plant work requests and NRC regulatory requirements.

Portions of the following maintenance activities were observed:

MWR-241669	HP turbine drain valve leaks past seat - repair
MWR-245594	Replace clogged floor drain tank filter.
MWR-246236	Replace missing P-18 flush drain locknut
MWR-256747	Repair new fuel crane conduit to control box
MWR-256787	Main Power Transformer phase 3 N2 cylinder - replace
MWR-256859	Hot Tool Room/Laundry drain clogged - inspect & replace
MWR-256983	Ground strap on "D" Amertap pump not attached to pump - attach ground strap
W00-358785	Inspect and repair, if necessary, the control room air conditioning solenoid filter

a. Diesel Generator (D/G) "1B" Air Start Pilot Valve Problems - Unit 1

While reviewing recent maintenance related plant incident reports and maintenance work request activities the inspectors noted in reports IR 1-91-383, IR 1-91-394 and IR 1-92-12, that on December 16, 1991, December 30, 1991 and January 22, 1992, diesel generator "1B" air start pilot valves would remain stuck open after D/G start and, in turn, would "blowdown" the associated air start reservoir. In each case an MWR was written, the valve was disassembled, cleaned then reassembled. The following explanation appears in the latest plant incident report IR 1-92-12:

On 1/23/92, per MWR 25017 and in response to IR 1-92-12, mechanical maintenance personnel disassembled and cleaned the main and pilot air start valves; which were found to be contaminated with rust/corrosion. The pilot valve had been installed approximately three weeks earlier as indicated below.

On 12/31/91, per MWR 245272 and in response to IR 1-91-394, maintenance personnel installed a new air start pilot valve; it was found to have corrosive residue, brass slivers, and other foreign material within the internals of the valve. The old

valve also had thread damage. This appeared to be the source of the slivers.

Since December, 1990, the number 1 air start pilot valve for the "1B" D/C has had a history of frequent replacements or clearings due to its sticking open from corrosive residue. Plant incident report 1-91-383 documents these problems and previous corrective actions.

The inspectors noted previous air start problems with the D/Gs in inspection report 50-348,363/91-19 and corrective actions taken by the licensee in an attempt to reduce corrosion problems in the D/G air start systems. Also an approved PCN, PCN S-91-1-7576, requires filters to be installed upstream of the air start solenoid valves in an effort to prevent corrosion products from reaching the pilot valves. Inspections into these air start problems are on-going and results of these inspections will appear in future reports.

- b. Update On William Powell Stainless Steel Valve Disc Holder Problems - Refer To RII Report 50-348/364/92-02, Paragraph 4.a (corrosion/deterioration valve steam disc holder).

On January 31, MESH issued a memorandum, to plant management, describing concerns with William Powell stainless steel valve disc holders. The memorandum stated that it was not known how extensive the problem is and that the plant has noted that possibly over 100 of these valves exist. In a telephone conversation between MESH and the Vice President of Engineering and Quality at William Powell, MESH was informed that the disc holders could be stainless steel, carbon steel or holders of an "unspecified material". Also that the only positive way to verify the true material of the disc holders is to call William Powell "on an individual valve basis" and provide them the specific valve identification, serial and drawing numbers. William Powell would, in turn, attempt to provide the needed information.

MESH has further requested, from their corporate and plant support groups, the above information. They have also asked to be provided with such information by March 27, 1992. The inspectors will continue to evaluate this investigation of the disc holder material and corrosion problems and will provide an update on these corrective actions in future reports.

No deviations or violations were identified in this area. The results of inspections in the maintenance area indicate that both operations and maintenance personnel conducted the above tests in accordance with applicable procedures.

5. Fire Protection/Prevention Program (64704)

On March 3, extensive repairs were made to fire protection loop piping located along the protected area fence on the northern boundary of the

service water structure/facility. Starting on February 10, site fire protection personnel evacuated the area around the facility and repaired various elbows and joints in the piping. New sleeves and associated flanges have also been installed as part of the overall repair of the system. Fire protection personnel are continuing to locate and repair other underground leaks in the yard loop piping. The inspectors will continue monitoring of these activities and follow-up to these repairs will appear in subsequent inspection reports.

Within the areas observed, no violations or weaknesses were identified.

6. Training For Emergency Preparedness (82206)

On February 18, the inspectors observed portions of a TSC "table-top" training exercise which was conducted as part of site training for one of the designated emergency preparedness response groups. All designated personnel responded appropriately and expeditiously to the emergency alarm and the overall drill scenario.

On February 25, the resident inspectors and Region II Emergency Preparedness Section personnel observed a plant-wide accountability exercise. Specifics of this exercise can be found in inspection report 50-348,364/92-07.

Within the areas observed, no violations or weaknesses were identified.

7. Pre-Refueling/Outage Activities - Unit 2 (60705)

The inspectors observed portions of pre-refueling/outage activities including: the use and content of procedures for new fuel handling, transfer of new fuel to the spent fuel pool and spent fuel pool "grid map" verification; the administrative controls for transfer of new fuel and other pre-refueling activities. The inspectors noted that the controls for outage/refueling made provisions for: defined lines of supervision, shift manning, training for key personnel, communication requirements, and radiation monitoring.

The inspectors evaluated the following refueling related procedures:

- o 2-SOP-1.11, "Mid-Loop Operations"
- o 2-MP-1.0, "Maintenance Refueling Procedure"

Within the areas observed, no violations or weaknesses were identified.

8. Loss of Decay Heat Removal And Mid-Loop Operations (TI 2515/103)

Prior to Unit 2 entering the refueling outage, the inspectors evaluated the plant's status concerning the NRC's directive on mid-loop operation, TI 2515/103. The directive provides specific guidance concerning evaluation of RHR hardware/instrumentation for long-term core cooling.

Additionally, the inspectors referenced a Region II memorandum dated July 27, 1990, which provided specific guidance concerning Generic Letter 88-17 and TI 2515/103. The checklist items attached to the letter specifically required the inspectors to evaluate the licensee's program for mid-loop operations as follows:

- o FNP's response to Generic Letter 88-17 was reviewed. RII has requested technical assistance regarding the licensee's reliance on lifting of the reactor vessel pressure head with detensioned bolts for venting capacity during operation with reduced inventory.
- o FNP has conducted a review of their mid-loop procedures and applicable emergency operating procedures and as a result of this review enhancements were made and increased awareness has been noted. Also, all operators received training on various mid-loop items and procedures during the last requal cycle.
- o Specific procedures have been developed to ensure containment closure capability for mitigation of radioactive releases. The mid-loop operating procedures require action, on the part of licensed operators, to ensure containment integrity at all times and isolation of containment, if necessary, should it be open for movement of refueling components/material. These procedures also designate the responsibilities for accomplishing containment closure when necessary.
- o At least two independent, continuous temperature indications are operable during mid-loop operations. Operations uses installed core exit thermocouples. This provides two independent, continuous indications to the plant computer and control board displays.
- o At least two independent, continuous water level indications are operable during mid-loop operations. One level indication, tygon tubing, is walkdown/inspected at least once per shift and a television camera is focused on the tubing with a monitor in the control room. A backing to the tygon tubing provides contrast to give a readily visible indication of level on the monitor. Other level indication is either provided by the reactor vessel level indication system (RVLIS), or installed ultrasonic level indicators (2 separate indications mounted on 2 different hot legs).
- o FNP's procedures for reduced inventory operations have specific precautions against evolutions which cause perturbations in the RCS while at reduced inventory. Many of the facility shutdown procedures and instructions given during various times of the outage stress that time spent at mid-loop is to be minimized and that while at mid-loop, work which may cause perturbations is to be stopped.
- o During mid-loop operations, at least two additional means of adding inventory to the RCS are available. In addition to the RHR pumps, one of three charging/HP injection pumps is available and can be aligned to borate the RCS at any time. If problems should develop with these pumps, gravity feed from the RWST to the RCS is possible.

- o Mid-loop operating procedures require the proper sequence for installing S/G nozzle dams and removing PZR manways. These procedures should prevent simultaneous blocking of all hot legs and subsequent pressurization of the upper plenum of the reactor vessel. It should be noted, that during this refueling, the core is being entirely off-loaded and the plant is to be placed into mid-loop operation after the core is reinstalled, on or about April 20, for a limited number of days.
- o During mid-loop operation at FNP, as many as 5 offsite sources of power and 5 D/G's could be available. Increased emphasis has been placed on the availability of vital power. A new procedure, SOP-100.0, Shutdown Safety Assessment, has been implemented as a means of evaluating, on a shift basis, the safety condition of the plant when in Modes 5 or 6 or when the plant is "defueled". In addition to monitoring power availability, this procedure also points out the need to assess reactivity, core cooling, containment integrity, and RCS inventory/integrity throughout the refueling/outage period.

The inspectors found that the licensee has the necessary procedures and controls in place and have implemented these procedures to control the above items. Guidance for mid-loop is contained within the following procedures:

- o SOP-1.11, "Mid-Loop Operations"
- o AOP-12, "Residual Heat Removal (RHR) Malfunction"
- o AOP-5.0, "Loss of Electrical Train A or B"
- o ECP-0.0, "Loss of All AC Power"
- o EEP-0, "Reactor Trip or Safety Injection"
- o SOP-1.6, "Draining of the Reactor Coolant System"
- o MP-1.0, "Maintenance Refueling Procedure"
- o SOP-100.0, "Shutdown Safety Assessment"

No deviations or violations were identified in this area. The results of inspections for this temporary instruction indicate that management, operations and maintenance personnel have prepared for the upcoming outage/refueling of Unit 2 in accordance with applicable procedures.

9. Review of Periodic and Special Reports (90713)

The inspectors evaluated the 1990 and 1991 special reports for both units. These reports are consistent in both content and structure. They contain issues which primarily involved fire protection, however, 4 issues did not involve fire protection.

A "PORC-approved" FNP status report is maintained for all Technical Specification required Special Reports. No deficiencies identified.

10. Action on Previous Inspection Findings (92701)

(Closed) Inspector Followup Item 348/364-89-22-05, Implementing 10 CFR 50.59 Guidance

Between September 24, and 28 1991, the NRR Project Manager conducted an on-site audit of the Farley training program for performing 10 CFR 50.59 safety evaluations. The purpose of the audit was to determine the extent of licensee actions taken as a result of a prior audit (Inspection Report 89-22 dated November 9, 1989). In addition, discussions were held concerning the incorporation into licensee procedures, the industry guidelines contained in NSAC-125, "Guidelines for 10 CFR 50.59 Safety Evaluations," dated June 1989.

The following documents were discussed with site personnel:

- o FNP-0-AP-88, Nuclear Safety Evaluations, Revision 0, dated December 11, 1990
- o Training Program Handout TSM-510, Nuclear Safety Evaluations, dated January 1991.
- o Training Program Instructor's Guide TSM-510, Nuclear Safety Evaluations, dated January 1991.
- o Nuclear Safety Analysis Center, NSAC-125, Guidelines for 10 CFR 50.59 Safety Evaluations, dated June 1989.

Farley Training Program TSM-510, Nuclear Safety Evaluations, provides training for implementing procedure FNP-0-AP-88, Revision 0, Nuclear Safety Evaluations. This procedure provides guidance for complying with the requirements of 10 CFR 50.59 by establishing the methods for preparation, review, and approval of safety evaluations. FNP-0-AP-88, Revision 0, was prepared utilizing, in general, the guidance contained in NSAC-125. As discussed later, differences exist between TSM-510 and FNP-0-AP-88.

Although FNP-0-AP-88 was discussed during the audit, the intent of this audit was not to review the content or implementation of this procedure. These areas will be the subject of a future audit.

Section 5.1 of FNP-0-AP-88 requires that at least every two years, personnel involved in preparation, review, or approval of 10 CFR 50.59 safety evaluations be trained in the following areas: 10 CFR 50.59, Procedure FNP-0-AP-88, Farley Final Safety Analysis Report (FSAR), FSAR word search program, and Farley Technical Specifications (TS).

The training program was prepared utilizing FNP-0-AP-88, plant and industry experience, and guidance contained in NSAC-125, 10 CFR 50.59, the FSAR, and the TS. Initial class time is eight hours with retraining planned to be four hours in length. Retraining of plant personnel has not been required as initial training was only begun in January 1991. The Farley Training Department normally tracks training requirements utilizing a computerized data base to identify the need for retraining. The intent is to include the training records for FNP-0-AP-88 in this data base to identify the need for retraining. The controls established to ensure retraining will be reviewed in the future.

The content of the training program was reviewed to determine if it accurately reflected the requirements and guidelines of FNP-0-AP-88. The Instructor's Guide and class handout, both numbered TSM-510 and dated January 1991, were reviewed. Based on a review of this material and discussions with the instructor, it was determined that the training adequately covered the subjects required by Section 5.1 of FNP-0-AP-88. Strengths were identified in the conduct of the training program associated with the instructor's tailoring of the class to the background of the attendees and instructing the attendees to follow a conservative approach in interpreting and applying the guidance for performing safety evaluations. During the audit, differences in the content of the training program and FNP-0-AP-88 were found. Examples of these are as follows (page numbers refer to the class handout):

- o The training program guidance for performing safety evaluation screening (Pages 24 - 26) contains guidance that is not contained in FNP-0-AP-88. Examples are the following areas:
 - . Previous changes that have not yet been included in an FSAR update.
 - . Structures, systems, and components not explicitly described in the FSAR
 - . Temporary changes
 - . Changes to non-safety--related equipment
- o The approval authority of department Managers (Pages 31 and 32), does not completely reflect the authority designated in Section 4.4 of FNP-0-AP-88.

- o Under the training program discussion on the probability of occurrence of an accident (Pages 33 - 34), the guidance refers only to FSAR Chapter 15 as compared to FNP-0-AP-88 which refers to Chapters 6 and 15. Also, the training program only discusses changes from one frequency class to another compared to FNP-0-AP-88 which discusses the need to consider changes within a frequency class.
- o The discussion on the possibility of an accident of a different type (Pages 42 - 43) is also applicable to the possibility of a malfunction of a different type (Page 44).
- o The discussion on a reduction in the margin of safety (Pages 44 - 46) refers to use on documents beyond the Technical Specification Bases and the FSAR to define the margin. This guidance is not contained in FNP-0-AP-88.

The licensee should ensure that the guidance contained in the training program and FNP-0-AP-88 are consistent. The licensee should also consider incorporating guidance concerning review of the actual modification implementation process. Consistency of the guidance provided in the training program and FNP-0-AP-88 will be reviewed again in a future audit.

The Manager of Training was the only instructor teaching this course at Farley at the time of the audit. Based on interviews, it was determined that the instructor was also responsible for preparing the training course. The instructor was knowledgeable of the subject matter of the course, procedural and industry guidance in this area, and practical examples utilizing Farley and industry experience.

Inspector followup item 348/364-89-22-05, Implementing 10 CFR 50.59 guidance, identified a concern that over 200 personnel from all groups at the site were listed as qualified reviewers for performing 10 CFR 50.59 evaluations. This item indicated that for training and qualification purposes, it would appear that the listing should be reduced. This action would minimize training requirements and should result in an improved safety evaluation effort. Currently, about 240 personnel at Farley are trained and qualified to perform 10 CFR 50.59 safety evaluations. No minimum education or experience requirements are specified for personnel involved in preparation and approval of safety evaluations. Although, a large number of plant personnel are being trained with respect to the 10 CFR 50.59 process, a concern is whether this large number of people all have the knowledge and access to the resources needed to identify and evaluate adequately the licensing bases and commitments associated with a change to ensure that all potential safety concerns are identified. Therefore, there is also a concern with the qualifications of personnel involved in the 10 CFR 50.59 process and not just the number.

The qualification of personnel involved in the preparation, review, and approval of safety evaluations will be evaluated during future audits. The intent of the evaluations will be to ensure that someone with the knowledge of the current design and licensing bases that has access to the needed resource documents is systematically involved in reviewing all safety evaluations prepared.

As future audits will continue to evaluate this area of concern, inspector followup item 348/364-89-22-05 is closed.

11. Evaluation of Licensee Self-Assessment Capability - NORB Meeting (40500)

On March 6, the inspectors attended the regularly scheduled quarterly meeting of the Nuclear Operations Review Board (NORB) which was held at the plant site. The NORB provides an independent review and audit of plant activities in the areas of plant operations, engineering, nuclear safety, and quality assurance.

At this meeting a TS quorum, consisting of the Vice President-Nuclear, Chairman, six members, and two alternates, were present. Items reviewed included:

- SAER audit activities.
- Safety Evaluations
- Meeting minutes of the PORC (Plant Operations Review Committee).
- LERs and NRC audit findings.
- Alternate S/S plugging criteria & proposed S/G sleeving requests.
- NRC/Southern Nuclear hearings on EQ issues

One safety evaluation involving proposed changes to procedures and equipment was postponed to the next scheduled meeting in June so that the members could have more time to review the proposed modifications.

Prior to the meeting, each member was provided with an agenda of the items to be discussed. Each agenda contained detailed information on every item. The members appeared to be well informed on the agenda items and the meeting was conducted in a professional manner. As appropriate, members presented differing views and methods of resolution.

The NORB evaluation found no trends indicative of decreasing plant safety. No additional recommendations for improving weak areas were discussed and no additional corrective actions for licensee identified discrepancies were noted.

No violations or deviations were identified in this area. The inspectors observed concerted efforts on the part of management to resolve key issues which required a higher degree of NORB attention.

12. Exit Interview

The inspection scope and findings were summarized during management interviews throughout the report period, and on March 10, with the plant manager and selected members of his staff. The inspection findings were discussed in detail. The licensee acknowledged the inspection findings and did not identify as proprietary any material reviewed by the inspectors during this inspection.

Licensee was informed that the item discussed in paragraph 10 was closed.

<u>ITEM NUMBER</u>	<u>DESCRIPTION AND REFERENCE</u>
364/92-04-01 (NCV)	Unit 2 incore detector "D" not placed into a stored condition following completion of flux mapping
364/92-04-02 (NCV)	Incorrect positioning of the Unit 2 train "A" solid state protection system (SSPS) multiplexer test switch

13. Acronyms and Abbreviations

AFW	-	Auxiliary Feedwater
ALARA	-	"As Low As Reasonably Achievable"
AOP	-	Abnormal Operating Procedure
AP	-	Administrative Procedure
APCO	-	Alabama Power Company
BOP	-	Balance of Plant
BTRS	-	Boron Thermal Regeneration System
CFR	-	Code of Federal Regulations
CVCS	-	Chemical and Volume Control System
CCW	-	Component Cooling Water
CSTS	-	Condensate Storage Tank System
CS	-	Containment Spray System
DDFP	-	Diesel Driven Fire Pump
D/G	-	Emergency Diesel Generator
DPM	-	Disintegration Per Minute
ECP	-	Emergency Contingency Procedure
EIP	-	Emergency Plant Implementing Procedure
EPA	-	Environmental Protection Agency
EQ	-	Environmental Qualifications
ESF	-	Engineered Safety Features
EWR	-	Engineering Work Request
F	-	Fahrenheit

FNP - Farley Nuclear Plant
FSP - Fire Surveillance Procedure
GPM - Gallons Per Minute
ISI - Inservice Inspection
IST - Inservice Test
LCO - Limiting Condition for Operation
MDFP - Motor Driven Fire Pump
MESG - Maintenance and Engineering Support Group
MOV - Motor-Operated Valve
MOVATS - Motor-Operated Valve Actuation Testing
MWR - Maintenance Work Request
NCR - Nonconformance Report
NRC - Nuclear Regulatory Commission
NRR - NRC Office of Nuclear Reactor Regulation
OATC - Operator at the Controls
PAP - Primary Access Point
PCCV - Positive Closing Check Valve
PCN - Plant Change Notice
PCR - Plant Change Request
PMD - Plant Modifications Department
PORV - Power Operated Relief Valve
PPB - Parts Per Billion
PPM - Parts Per Million
PRT - Pressurizer Relief Tank
PSID - Pressure per Square Inch Differential
PVC - Polyvinyl Chloride
PZR - Pressurizer
RCP - Reactor Coolant Pump
RCS - Reactor Coolant System
RHR - Residual Heat Removal
RTD - Resistance Temperature Detector
SI - Safety Injection
S/G - Steam Generator
SAER - Safety Audit and Engineering Review
SFO - Shift Foreman - Operating
SGFP - Steam Generator Feedwater Pump
SO - Systems Operator
SFP - Spent Fuel Pool
SOP - Standard Operation Procedure
SPDS - Safety Parameter Display System
SS - Shift Supervisor
SSPS - Solid State Protection System
STP - Surveillance Test Procedure
SWS - Service Water System
TS - Technical Specification
TSC - Technical Support Center
VDC - Voltage Direct Current
WA - Work Authorization