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REGION II

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Report Nos: 50-335/96-20, 50-389/96-20

Licensee: Florida Power & Light Co.

Facility: St. Lucie Nuclear Plant, Units 1 & 2

Location: 6351 South Ocean Drive
Jensen Beach, FL 34957

Dates: November 24, 1996 - January 4, 1997

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EXECUTIVE SUMMARY

St. Lucie Nuclear Plant, Units 1 & 2
NRC Inspection Report 50-335/96-20, 50-389/96-20

This integrated inspection included aspects of licensee operations, engineering, maintenance, and plant support. The report covers a 6-week period of resident inspection; in addition, it includes the results of a one week, region-based inspection in the area of operator requalification and the results of a one week, region-based inspection in the areas of radiation protection and chemistry.

Operations

- Operations control of the plant during a downpower to remove the turbine from service for a hydraulic fluid leak and subsequent power ascension after the repairs were complete was competent (paragraph 01.2).

- Walkdown of both units' Boric Acid Makeup system identified no deficiencies (paragraph 02.1).

- The inspector noted that the Unit 2 Chemical and Volume Control System letdown radiation monitor was placed in the Out of Service log in March of 1991. The licensee isolated the system with no intent of ever returning it to service and incorrectly performed a 10 CFR 50.59 screening that identified the system as not described in the Final Safety Analysis Report. The licensee had identified this discrepancy in May, 1996 as part of a corrective action committed to from a previous violation identified in Inspection Report 50-335,389/96-03. This was identified as another example of Enforcement Action 96-040, Violation 01033 (VIO 50-335,389/96-03-03, "Change to Procedure as Described in UFSAR Without A Safety Evaluation") (paragraph 02.2).

- The inspectors' review of the licensee's cold weather preparations noted a weakness in completing the corrective actions in response to a 1992 Engineering Evaluation (paragraph 02.3).

- The 2A Emergency Diesel Load run was completed safely and effectively (paragraph 04.1).

- Turbine Valve Testing was completed satisfactorily. The inspector noted several instances of good use of three part communication (paragraph 04.2).

- The inspector concluded that the licensee's requalification program basically complied with the requirements of 10 CFR 55.59 for the areas inspected. The annual licensed operator requalification examinations reviewed and observed during the inspection were adequate but overall quality was judged to be average and in need of improvement (paragraph 05.1).

Maintenance

- Repair of the 1A charging pump was completed successfully and in a timely manner. Additional effort and a questioning attitude by

maintenance personnel resulted in identifying a degraded condition with the pump seal cartridge (paragraph M2.1).

- Monthly maintenance on the linear power range nuclear instrumentation was performed adequately. Good communication was observed between all involved groups (paragraph M4.1).

Engineering

- Engineering review of safety related logic as requested by Generic Letter 96-01 found several components that had not previously been tested. Each component was addressed in a timely manner. There were three instances in which the licensee did not comply with Technical Specifications. The licensee-identified and corrected violation was treated as a Non-cited Violation, consistent with Section VII.B.1 of the NRC Enforcement Policy and was identified as NCV 389/96-20-01, "Failure to Satisfactorily Test Safety Related Logic Circuits" (paragraph E8.1).

Plant Support

- The licensee demonstrated the ability to evacuate the site in an orderly manner. The security software and hardware was also demonstrated to be sufficient to obtain an accountability list (paragraph P1.1).

- The licensee continued to experience problems with the contamination control program and the licensee was taking additional corrective action measures to provide more positive control of contaminated equipment and material (paragraph R1.1).

- An extended refueling outage with a duration nearly twice the planned length prevented the licensee from meeting the 1996 collective dose goal for the site (paragraph R1.2).

- The licensee was making progress in the reduction of excess radioactive contaminated material stored on site (paragraph R2.1).

- Administrative controls for the training of personnel responsible for the transportation of radioactive materials were weak (paragraph R5.1).

Report Details

Summary of Plant Status

Unit 1

Unit 1 entered the report period at full power. It essentially remained at full power for the entire period with one exception. On December 26, 1996, the turbine was taken off-line to facilitate repairs to the Digital-Electro Hydraulic (DEH) system which had developed a significant leak. The unit was returned to full power by the end of the day.

Unit 2

Unit 2 remained at essentially full power for the entire report period.

I. Operations

01 Conduct of Operations

01.1 General Comments (71707)

Using Inspection Procedure 71707, the inspectors conducted frequent reviews of ongoing plant operations. In general, the conduct of operations was professional and safety-conscious; specific events and noteworthy observations are detailed in the sections below.

01.2 Unit 1 Turbine Shutdown Due to DEH Leak (71707)

a. Inspection Scope

Unit 1 was taken off-line on the morning of December 26 due to a leak in the turbine's Digital-Electro Hydraulic (DEH) system. The unit was returned to full power after repairs were complete.

b. Findings

Early on the morning of December 26, a watchstander noted that a known DEH leak had significantly worsened. A closer inspection by the licensee revealed that the source of the leak appeared to be from the base of the valve block for the Emergency Trip Fluid Control solenoid valve. The licensee had previously generated a Plant Work Order (PWO) on December 19, 1996, documenting a leak rate of less than one drop per minute. By 2:00 a.m., on December 26, the leak rate had increased to approximately 1.4 gallons per hour. The licensee unsuccessfully attempted to tighten the block capture bolts. Since the Trip Block was unisolable from the turbine control system, plant management made the decision to take the turbine off-line to allow repairs to be made.

The plant commenced the downpower at approximately 5:00 a.m. and the turbine was taken off-line by 7:15 a.m. The crew controlled the evolution well, maintaining a professional demeanor throughout.

After the turbine was secured and the clearance hung, Maintenance commenced repair of the leak as well as two other known leaks on the system. The repair was well planned and communication between Planning, Maintenance, and Operations was good. The leak was caused by a nick in an O-ring. The licensee sent the O-ring out for failure analysis.

During the period that the turbine was off-line, the licensee identified some weaknesses in crew performance. The licensee is conducting a self-assessment on the event. This will be reviewed in the next inspection report.

Work and testing were completed by approximately 12:15 p.m. and the turbine was synchronized to the grid at about 1:15 p.m. The operating crew briefing was thorough, and procedural compliance was excellent. The plant recovery was without incident with full power being achieved late on peak shift.

c. Conclusions

The evolution was completed competently. The inspector noted good use of procedures by all watchstanders and that watchstander formality was good. Communication between all groups involved was commendable. Managerial oversight was adequate and allowed all tasks to be completed in a timely manner.

02 Operational Status of Facilities and Equipment

02.1 Boric Acid Makeup System Walkdown (71707)

The inspector walked down accessible portions of the boric acid makeup systems on both units. This included a review of procedures and engineering drawings. The procedures reviewed included:

- Chemistry Procedure, C-59, Revision 13, "Maintaining Boric Acid Makeup Tank Limits"
- Operating Procedure, OP 1-0250020, Revision 41, "Boron Concentration Control"
- Operating Procedure, OP 1-0250021, Revision 16, "Boric Acid Batching and Transferring"
- Operating Procedure, OP 2-0250020, Revision 26, "Boron Concentration Control"
- Operating Procedure, OP 2-0250021, Revision 12, "Boric Acid Batching and Transferring"

The inspector noted that the V2124 on Unit 1, 1A Boric Acid Makeup Tank (BAMT) Inlet from the Boric Acid Batching Tank, was open. Upon further investigation, the inspector found that the licensee was filling the 1A BAMT. At certain portions of the procedure, this valve can remain open although it might appear that there is no evolution ongoing at the tank.

Equipment operability, material condition, and housekeeping were acceptable in all cases.

O2.2 Unit 2 Letdown Radiation Monitor (71707, 37551)

a. Inspection Scope

During a control room tour conducted on December 18, the inspector noted that the Unit 2 Out of Service (OOS) log indicated the Chemical and Volume Control System (CVCS) letdown radiation monitor had been isolated since March 1991. Operators explained that the monitor had been isolated due to ALARA concerns in the area of the monitor. The inspector reviewed controls associated with the isolation of the monitor.

b. Findings

The inspector found that the isolation of the subject radiation monitor essentially resulted in it being abandoned in place. No maintenance had been planned for the component. Consequently, the inspector determined that the isolation of the component might represent a change to the plant as described in the Updated Final Safety Analysis Report (UFSAR).

The inspector reviewed the Unit 2 UFSAR and found the following references to the letdown radiation monitor:

- Section 9.3.4.1, "Design Bases," 9.3.4.1.1.g, stated that the CVCS, of which letdown is a portion, provides "...continuous measurement of...fission product activity."

- Section 9.3.4.2.1.2, "Normal Operation," which described the CVCS letdown flowpath, stated "[the] second stream, just after F-2202, is directed through the process radiation monitor (which measures the reactor coolant radioactivity level)."

- Section 9.3.4.6.6, "Radiation Monitoring Instrumentation," stated "[the] process radiation monitor provides a continuous recording in the control room of reactor coolant gross gamma radiation and specific fission product gamma activity thus providing a measure of fuel cladding integrity. A high alarm is annunciated in the control room."

- Section 11.5.2.2.2, "CVCS Process Monitor," stated that the "primary purpose of the CVCS process radiation monitor is to alert plant operators to an increase in reactor radioactivity as quickly as possible."

Further review by the inspector revealed that the radiation monitor is normally isolated in accordance with Operating Procedure OP 2-0210020, Revision 39, "Charging and Letdown - Normal Operation." Revision 29, dated December 1994 changed the normal position of the isolation valves from OPEN to CLOSED. The 10 CFR 50.59 screening was inappropriately marked as not a change to the facility as described in the Safety Analysis Report.

The inspector discussed his findings with the licensee, who stated that they were already aware of the inconsistency. Inspection Report 96-03 documented an apparent violation of 10 CFR 50.59 citing a discrepancy between the UFSAR and St. Lucie's written procedures. In response to this violation, the licensee had committed to perform reviews of both units' procedures to ensure that they were consistent with the UFSAR. The licensee discovered the discrepancy with the radiation monitor in May, 1996 and documented it on PMAI 96-03-157. An operability assessment has been performed and the safety evaluation is scheduled to be completed. The licensee has identified over 300 discrepancies between the UFSAR and their procedures, which they plan to incorporate in the next UFSAR update.

10 CFR 50.59 allows licensees to, in part, make changes to the plant as described in the UFSAR without prior NRC approval provided the change does not represent an unreviewed safety question. 10 CFR 50.59(b)(1) requires that licensees maintain records of changes made to the plant as described in the UFSAR and that those records include a written safety evaluation providing the basis for concluding that the change does not represent an unreviewed safety question. Contrary to this requirement, the licensee isolated the Unit 2 CVCS letdown radiation monitor (thereby effectively removing it from the plant) in March 1991 and proceduralized this status in December 1994 without a documented SE. The failure of the licensee to document an SE of the subject component was cited as another example of Enforcement Action 96-040, Violation 01033 (VIO 50-335,389/96-03-03, "Change to Procedure as Described in UFSAR Without A Safety Evaluation").

c. Conclusions

The inspector concluded that the licensee had, in failing to perform a SE per 10 CFR 50.59, improperly isolated the Unit 2 CVCS radiation monitor in March 1991. As a result, a violation of 10 CFR 50.59 has existed from March 1991.

02.3 <u>Cold Weather Preparations (71714)</u>

a. Inspection Scope

The inspector monitored plant activities and inspected plant components in accordance with Inspection Procedure 71714, Cold Weather Preparations, to verify the licensee was effectively implementing the cold weather preparations program.

b. Observations and Findings

The licensee's cold weather protection program is a subsection of Administrative Procedure 0005753, Revision 19, "Severe Weather Preparations." The procedure is implemented when the System Load Forecaster notifies the Nuclear Plant Supervisor (NPS) to do so, and is expected to be completed within 16 to 24 hours prior to the onset of the cold weather conditions. Additional measures are taken as the outside air temperature approaches 32°F. Protective measures generally include stationing space heaters, verifying/installing foam insulation around instrument piping, operating equipment to raise lube oil temperatures, blowing down air systems, etc.. Instruments which are required to be insulated are listed in Checklist 20 of this procedure.

On December 9, the inspector accompanied a maintenance worker while he verified the status of insulation on Unit 1 instrumentation in accordance with this checklist. Instrumentation inspected included Refueling Water Tank (RWT) level instruments, Condensate Storage Tank (CST) level instruments, and Auxiliary Feedwater (AFW) instruments. During this walkdown it was identified that the piping between the bottom of the CST and the CST level transmitters, LT-15-11 and LT-15-12, was not insulated. The inspector also noted that Feedwater (FW) transmitters PT-09-9B and PT-09-9D were not enclosed in insulated boxes. On December 10, the inspector walked down the remaining instruments in the checklist and noted the following additional discrepancies:

1-LT-07-2A	RWST level transmitter	Transmitter not enclosed in insulated box.
1-LT-07-2B	RWST level transmitter	Transmitter not enclosed in insulated box.
1-LT-07-2C	RWST level transmitter	Transmitter not enclosed in insulated box.
1-LT-07-2D	RWST level transmitter	Transmitter not enclosed in insulated box.
2-LT-15-9	Primary Water Tank level instrumentation	Insulation missing. (Already identified by licensee.)
1-LT-12-11	CST level transmitter	Insulation missing.
1-LT-12-12	CST level transmitter	Insulation missing.
2-LT-12-11	CST level transmitter	Insulation missing.
2-PT-09-10D	FW pressure transmitter	Insulation missing.

The licensee was informed of these discrepancies and initiated corrective action.

The inspector reviewed the licensee's response to IE Bulletin No. 79-24, "Frozen Lines." In a letter dated July 27, 1982, the licensee stated that most safety related piping and components were located within plant structures or underground and therefore no additional measures were needed to protect against freezing weather. However, the response included a detailed list of instrumentation and tubing that did require cold weather protection. The inspector noted that not all of the instruments listed in the response were included in checklist 20 of Administrative Procedure 0005753, "Severe Weather Preparations." However, the inspector walked down all of the instrumentation and verified that with the exception of a few short runs of piping the instruments were adequately protected with insulation. This information was given to the licensee whereupon they also performed a walkdown and initiated corrective action documents to repair insulation where necessary.

While reviewing Engineering Evaluation REA JPSL-90-003-90, the inspector noted that during the winter of 1989, the site was negatively impacted by freezing temperatures. Various instrument indications in the Control Rooms were lost or erroneous, fire protection lines ruptured, and a steam generator level transient occurred on Unit 1. This evaluation was written in response to that event, and conducted to identify and evaluate the freeze protection design basis. The evaluation, which was completed February 5, 1992, recommended the protection of additional equipment not already addressed in site procedures. The equipment which was identified was essentially the same as that identified in the licensee's response to IE Bulletin No. 79-24 in 1982. The inspector discussed with the licensee the need to include all of the instrumentation requiring cold weather protection in the administrative procedure. They initiated Condition Report (CR) 96-3053 to document their findings following the walkdown and to initiate corrective actions.

The inspector reviewed a Quality Assurance (QA) audit, QSL-PM-96-22, dated December 18, 1996, concerning freeze protection. The audit included a finding for site procedures not adequately addressing the storage, accountability, and inventory requirements for required freeze protection equipment. The responsible organizations had 30 days to develop corrective actions for the finding. As short term corrective action, the licensee inventoried the equipment required by procedure and submitted purchase requests for those items they did not already have.

c. Conclusions

In 1992, the licensee identified known vulnerabilities relating to inadequate freeze protection. Their failure to take action in response to Engineering Evaluation REA JPSL-90-003-90 is considered a weakness in completing corrective actions. Although all of the equipment requiring cold weather protection was not identified in site procedures, with the

exception of a few short runs of piping it was, in fact, protected. Additional equipment needed to complete the site procedure was procured by the end of the report period. The licensee initiated corrective actions to repair insulation where needed and to review existing procedures for needed enhancements.

04 Operator Knowledge and Performance

04.1 Emergency Diesel Generator Load Run (61726)

a. Inspection Scope

On December 11, Operations performed the monthly surveillance on the 2A Emergency Diesel Generator (EDG) per Operating Procedure OP 2-2200050A, Revision 24, "2A Emergency Diesel Generator Periodic Test and General Operating Instructions." The inspector observed portions of the surveillance from the control room and the EDG building.

b. Findings

The pre-job briefing was thorough and attended by those individuals involved in the surveillance. The ANPS solicited questions and comments from all crew members, and ensured that everyone understood the task. The system engineer was present in the EDG room during the entire surveillance to ensure the EDG was running as he expected. The SNPO was knowledgeable of the machine and the surveillance procedure being used.

c. Conclusions

The surveillance was performed safely and effectively. The crew exhibited excellent teamwork in the planning and performance of this evolution.

04.2 Turbine Valve Testing (61726)

a. Inspection Scope

Unit 2 turbine valve testing was performed on December 20 in accordance with Operating Procedure OP 2-0030150, Revision 64, "Secondary Plant Operating Checks and Tests."

b. Findings

Turbine valve testing was scheduled to be performed on mid-shift of December 20. However, it was delayed to later in the day due to a worsening problem with the "A" reheat stop valve. Historically, the reheat stop valve had been closing very slowly when tested due the test valve solenoid malfunctioning. In this particular test, the test valve essentially did not perform its function and it took over ten hours for pressure to bleed off after securing hydraulics. Engineering is evaluating reducing the frequency of testing the reheat stop valve to reduce the amount of time required to perform this surveillance.

The actual testing of the turbine governor valves and stop valves was performed on day shift. The pre-evolution briefing and coordination of the testing was good. The evolution was performed smoothly, and the plant recovery was uneventful. The crew used three-part communication well. There were several examples where miscommunication was corrected by using the system. Procedural compliance was very good.

c. Conclusions

The turbine valve testing was performed efficiently and safely. The crew worked together very well as a team to complete the evolution.

05 Operator Training and Qualification

05.1 Licensed Operator Requalification Program (71001)

a. Inspection Scope

During the period December 2-5, 1996, the NRC conducted a routine, announced inspection of the licensed operator requalification program. The inspector reviewed and observed annual requalification examinations conducted by the licensee and conducted inspection activities in accordance with Inspection Procedure 71001. Specific areas of review included program implementation procedures, and operator annual operating examinations (development, administration, and grading).

b. Observations and Findings

The St. Lucie requalification training program is documented in FPL Procedure AP 0005720, Revision 41," Licensed Operator Requalification Program." During this inspection, the inspector reviewed this procedure and St. Lucie Plant Training Department Guideline No. TG-004, Revision 0, "Written Examination Administration and Control." The inspector did not identify any deficiencies in either of these documents.

EXAMINATION DEVELOPMENT

In general, the inspector observed that overall examination development was average. The inspector found the overall simulator scenario quality to be good. Crew critical tasks for the two scenarios reviewed and observed were properly identified. Dynamic simulator scenarios were found to be of appropriate difficulty and complexity. Each scenario tested operator knowledge and familiarity with emergency, abnormal, and normal operating procedures and the integrated operation of the St. Lucie nuclear plant. The inspector concluded that this portion of the examination was a fair measure of licensed operator skills and ability. The simulator test was determined to be the best developed area of the requalification examination that was observed by the inspector.

The inspector found the overall Job Performance Measure (JPM) quality to be average. The JPMs were generally of good difficulty but several JPMs were short in length and considered to be too easy for a requalification

evaluation tool. It was noted that many JPMs had not been revised in several years; some for over four years. Discussions with the training staff indicated that all JPMs had been reviewed within the last year but this review had not been documented on the JPM. Several areas for improvement were identified and discussed with training department supervision. These task improvements included identifying all critical steps, properly determining time validation, providing appropriate cues for existing conditions and ensuring JPM steps match the procedure.

The inspector found the overall written examination quality to be below average. The licensee's written examination consisted of both a static simulator test and an open reference test. Both tests were multiple choice type examinations which was consistent with the examination process NRC would use should it administer the examinations. Both examinations were found to be testing important concepts and thus the inspector determined that the focus of the tests was good. However, many individual questions had technical and administrative difficulties that lowered the quality of the test. Written question weaknesses included the use of poor or obviously wrong distractors (distractors are the three incorrect choices for a multiple choice question), use of distractors that were subsets of the answers or actually the same item repeated twice, use of direct look-up questions, use of additional leading information in distractors and answers to aid the operator in choosing the answer but was not needed actually to determine a correct response to the question, and use of questions whose information in the stem provides the answer to another separate question on the test. These areas for improvement were identified and discussed with training department supervision. Based on the inspector's comments, the training staff made several changes to improve the written examination prior to its administration.

Given the quantity and scope of improvements needed that were identified by the inspector, an improved method of quality review of JPMs and written test questions should be considered by the licensee.

EXAMINATION ADMINISTRATION

The inspector observed the administration of all or part of twenty-five JPMs and four scenarios to twelve licensed operators. The facility evaluators did an adequate job of executing the examination process. Some simulator setup problems were observed during one group of JPMs. Assistance was sought and the problems were corrected. Despite the problems identified above with JPM cues, the evaluator for in-plant JPMs did a good job of actually providing appropriate cues to the operator when needed. However, the inspector did observe several occasions where inconsistent cues were given. These oversights did not affect the validity of the evaluation.

The inspector considered the administration of the dynamic simulator examination to be above average with one notable comment. The facility evaluators did a good job in making objective observations and of identifying and properly characterizing the significance of operator

performance strengths and weaknesses. However, one substitute evaluator exhibited a less critical view of operator performance than the other evaluators on the team. At times this evaluator appeared to be rationalizing operator actions rather than identifying actual operator performance deficiencies. On a positive note, the inspector observed that the other evaluators held their ground with this individual regarding the proper role of instructors during the annual evaluations. They insisted on conducting follow up questioning with these operators and documenting all weaknesses or areas of concern. The inspector also noted that a representative of Operations management observed only one of the six simulator examination scenarios that were administered. The lack of significant operations department involvement in the licensed operator requalification process was considered a program weakness.

The inspector examined the simulator for lack of physical or modeling fidelity. The inspector did not identify any significant discrepancies during the course of the examinations.

EXAMINATION GRADING

The inspector reviewed the final grading of the walkthrough and simulator examinations administered during the week of inspection. No discrepancies between facility evaluator grading and the observations made by the inspector were identified.

OPERATOR PERFORMANCE

The inspector observed the following operator performance issues during the conduct of the requalification examinations. The inspector noted that during the major transient part of the dynamic simulator scenarios, nearly all NPSs were observed spending a significant period of time examining the Emergency Plan and talking on the telephone. These NPSs allocated little of their time for their oversight responsibility. They infrequently stepped back to assess crew activities and response to the event, nor did they significantly participate in developing the mitigation strategies that were eventually pursued by the team. Consequently, the benefit of this very knowledgeable and experienced senior operator was often not effectively utilized in combating the casualty. The inspector also noted during these scenarios that crew communications were very rough. The operators were observed to frequently make errors using the phonetic alphabet and occasionally the message content of their communications was disjointed or confusing. As a result, time efficiency was lost and complete, accurate repeatback of crew orders was made unnecessarily difficult.

The inspector observed main control room activities during the plant walkthrough portion of the examination. The inspector found both control rooms to be noisy with extraneous personnel present who had no obvious official business with the plant's operators. The licensed operators were observed to be talking with these personnel about personal activities for extended periods of time, frequently with their backs turned away from the control panels and plant indicators. Several

plant annunciators were received while the inspector was present and the operators promptly responded to these alarms with no adverse consequences noted. Regardless, the informality of the operators and lack of access control to the control rooms were determined to be below NRC expectations.

c. Conclusions

The inspector concluded the training department procedures inspected were adequate and were being followed by the training department staff. The inspector also determined that the dynamic simulator examinations were good testing instruments of operator competence but that test items for the plant walkthrough and written portions of the examination showed room for significant improvement. The inspector concluded the annual licensed operator requalification examinations reviewed and observed during the inspection were adequate but overall quality was judged to be average.

08 Miscellaneous Operations Issues

08.1 (Closed) Violation 50-335/95-18-01: Failure to Follow Procedures and Maintain Current and Valid Log Entries in the Rack Key Log and Valve Switch Deviation Log (92901)

Contrary to Administrative Procedures 1-0010123, Revision 99 and 2-0010123, Revision 68, "Administrative Controls of Valves, Locks, and Switches," on two occasions the licensee failed to make the required entries in the Rack Key log when keys were issued and returned. In addition, licensee reviews of the Valve/Switch Deviation Log were determined to be inadequate. The licensee's corrective action was to revise Administrative Procedures 1-0010125 and 2-0010125, Revision 102 and 57, respectively, "Schedule of Periodic Tests, Checks, and Calibrations," to ensure the Nuclear Plant Supervisors (NPS) review the Valve/Switch Deviation Log each shift, the Assistant Nuclear Plant Supervisors (ANPS) review the Key Rack log each midnight shift, and the Shift Technical Advisors (STA) review the Valve/Switch Deviation log once per week. The inspector reviewed both the Valve/Switch Deviation log and the Key Rack log and found no discrepancies. All required reviews had been completed. The inspector concluded the licensee's action had been appropriate.

08.2 (Closed) Violation 50-389/95-21-01: Failure to Follow Clearance Procedure (92901)

This violation involved an improperly hung clearance on a valve that was tagged locked closed although no locking device was installed. The cause was determined to be a cognitive error on the part of the utility non-licensed operator. The error was immediately corrected, the NLO was disciplined, administrative procedural guidance on verifying clearance valve position verification was strengthened, and the lessons learned were incorporated into the operators requalification training. The

inspectors reviewed the completed corrective actions and have concluded that the actions were adequate to preclude future occurrences.

08.3 (Closed) Violation 50-389/95-21-02: Failure to Follow the Equipment Clearance Order Procedure and Require Independent Verification of TS Related Component (92901)

This violation involved inconsistent application of the safety review criteria on equipment under clearance. The governing procedure required that, when authorizing a clearance, the NPS/ANPS/NWE signify which of the five safety review items were completed. In particular, the steam generator atmospheric steam dump valve breakers were independently verified in one clearance and not another. When informed of this by the NRC the licensee removed the clearance and subsequently hung a new clearance which included the independent verification. Further corrective actions included written counselling of all Operations Department Senior Reactor Operators of the need for meticulous attention to detail when generating a Clearance Order, training all SROs on the event during requalification training, and improving the guidance in the clearance procedure. After review of the corrective actions, the inspector considered them to be adequate for this problem and to prevent recurrence.

II. Maintenance

M2 Maintenance and Material Condition of Facilities and Equipment

M2.1 1A Charging Pump Packing Leak Repair (62707) (37551) (71707)

a. Inspection Scope

On December 26, the 1A charging pump developed a packing leak of approximately 0.81 gpm. Operations secured the pump and isolated it from the system. Work Order (WO) 96033050 was initiated to investigate the cause for the failure and repack the pump. The inspectors observed portions of work activities associated with this activity.

b. Observations and Findings

The pumps are designed with three removable cartridges which contain the packing material. The pump plungers ride along the inside surface of the cartridges. A seal located at the bottom of the cartridges maintains a seal between the pump block and the cartridge itself. Maintenance personnel replaced the cartridges on the 1A pump with spare cartridges that had previously been assembled, tested the pump, and returned it to service on December 27. Because the pump had only 101 hours of run time since it was last repacked, a root cause investigation of the parts removed from the pump was initiated.

Maintenance personnel identified that the seal at the bottom of the cartridge was extruded and split on one of the removed cartridges. The licensee concluded that the leakage was not packing leakage but rather

leakage from the pump block around the damaged cartridge seal. Measurements were taken which identified that the width of the groove that the seal fit in was too narrow, and would not allow it to function properly. Manufacturer's drawings indicated the width of the seal groove should be .280 inches while the actual groove width was .200 inches. Further investigation determined that two of the three cartridges removed had undersized seal grooves. The licensee machined the grooves to the proper dimensions and rebuilt the cartridges to be used as spares.

The licensee stated that the pump manufacturer quit supplying these cartridges several years ago. Since that time four cartridges had been obtained from an alternate vendor. Two of the cartridges were those with the undersized seal grooves removed from the 1A pump. A third cartridge was located in the warehouse and it too had an undersized seal groove. Because the cartridges are interchangeable between the three Unit 1 charging pumps, the licensee believed that the remaining cartridge from the new vendor was installed on one of the other charging pumps. They intended to continue to monitor pump performance for indications of increased leakage and repair when necessary.

Discussion between the licensee and the vendor revealed that the vendor's drawing indicated the groove width was supposed to be .280 inches. Further discussion identified that, when the manufacturer's drawing was sent to the vendor, the dimensions for the groove width were illegible. While attempting to determine what the seal width should be, the licensee believes the vendor simply used the width of the seal itself, which was .200 inches. The root cause of this error was being investigated as part of the corrective action for this condition.

CR 96-3076 was written to document this condition and determine corrective action. The CR stated that this condition, although not desirable, was acceptable because even with a catastrophic seal or packing failure the pumps would still be capable of supplying the required amount of flow. Additionally, pump performance and leakage monitoring would ensure that a degrading condition would be readily identified.

The inspector observed maintenance personnel performing portions of the packing replacement. In addition, clearance 1-96-12-111, was reviewed for adequacy. No discrepancies were noted by the inspector.

c. Conclusions

Repair of the 1A charging pump was completed successfully and in a timely fashion. Additional effort and a questioning attitude by maintenance personnel involved in the repair resulted in identifying a degraded condition with charging pump seal cartridges.

M4 Maintenance Staff Knowledge and Performance

M4.1 Linear Power Range Nuclear Instrumentation Calibration (62707)

a. Inspection Scope

The inspector observed portions of the monthly linear power range nuclear instrumentation calibration for Unit 2 performed on December 12, 1996.

b. Findings

I&C technicians used Procedure 2-1220052, Revision 23, "Linear Power Range Safety and Control Channel Monthly Calibration" to perform the maintenance. The pre-job briefing was concise. Since this was a rather routine evolution, all affected parties were familiar with the procedure and any expected affects on the plant. The I&C technicians performed the calibration efficiently and kept the Operations personnel informed of their actions. The inspector reviewed the data and found no errors.

c. Conclusions

The licensee performed the maintenance adequately and safely. The inspector observed good communication between all groups involved.

III. Engineering

E8 Miscellaneous Engineering Issues

E8.1 Generic Letter 96-01 Issues (62707) (37551)

a. Inspection Scope

While reviewing safety related logic circuits, as requested by Generic Letter (GL) 96-01, "Testing Of Safety Related Logic Circuits," the licensee became aware of several circuit portions not previously tested. The inspector monitored activities related to the logic circuit review and subsequent testing.

b. Observations and Findings

On December 5, the inspector informed the licensee of a condition identified at another nuclear facility that involved the testing of the undervoltage and shunt trip electrical logic paths for the Reactor Trip Circuit Breakers (TCBs). Either device would cause the TCBs to trip, however, the test that was historically performed did not test each of the trip devices independently. On December 6, the inspector and the licensee reviewed applicable site drawings and determined that the same condition existed at St. Lucie.

The two trip coils, which are arranged in parallel, were being tested in accordance with vendor recommendations, by verifying that each relay

changed state. However, contacts located in each trip circuit logic path, which must also change state, had not been tested independently. Technical Specification (TS) 4.3.1.1 required that a functional test be performed at least once per 18 months or following maintenance or adjustment of the TCBs to verify the independent operability of the undervoltage and shunt trips. On December 6, after concluding the two logic paths had not been independently tested, the licensee entered TS 4.0.3 which allowed a delay of up to 24 hours before implementing the action requirements of the Limiting Condition for Operation (LCO) to permit the completion of a surveillance.

The licensee revised the surveillance procedure, Operating Procedure 2-1400059, Revision 23, "Reactor Protection System - Periodic Logic Matrix Test," to include independent testing of the two trip logic paths. The inspector reviewed the procedure and verified that it would satisfactorily test the intended portions of the circuit. On December 20, the licensee submitted Licensee Event Report (LER) 96-005-00, "Operation Prohibited by Technical Specifications due to Inadequate Surveillance Testing of Reactor Trip Breakers", to document the event. The inspector reviewed the subject LER and found that the licensee's corrective actions were adequate. The LER is closed.

On December 11, Engineering determined that the current method of testing the Auxiliary Feedwater Actuation System (AFAS) switches was inadequate. The procedure was written to place all four manual actuation switches in ACTUATE on one of the AFAS systems and verify system actuation. This did not verify that all four switches were performing their functions since it only required selective 2/4 logic to cause an initiation. The licensee verified proper operation of the switches the next day by individually placing each AFAS switch in the ACTUATE position and then verifying the proper contacts did pick up. This problem only affected Unit 2 since Unit 1 does not have any manual AFAS switches on the control panel and the local initiation switch logic is not 2/4. On January 7, 1997, the licensee submitted LER 96-006-00, "Operation Prohibited by Technical Specifications due to Inadequate Surveillance of Auxiliary Feedwater Components", to document the occurrence. The inspector reviewed the LER and determined that the licensee's corrective actions were sufficient. This LER is closed.

Also on December 11, Engineering determined that I&C Procedure 2-1400052, Revision 23, "Engineered Safeguards Actuation System Channel Functional Test", took credit for testing Main Steam Isolation Signal (MSIS) actuation on high containment pressure by observing the Automatic Test Insertion (ATI) status lights. However, during testing, the circuitry is such that it will not cause the ATI lights to illuminate if the MSIS actuating modules fail to respond to the high containment pressure trip test signals. Upon discovery, the licensee verified operation of the MSIS actuation logic by observing the MSIS actuation module trip status lights during test. This problem did not affect Unit 1 since the MSIS actuation logic does not include a high containment pressure trip. The licensee submitted LER 96-007-00, "Operation Prohibited by Technical Specifications due to Inadequate Testing of Main

Steam Isolation System Testing Logic," to document the event. The inspector reviewed the LER and determined that the corrective actions were adequate. The LER is closed.

c. Conclusions

The licensee did not comply with TS 4.3.1.1 (Reactor Trip Breakers), TS Table 4.3.2 item 7a (AFAS), and TS Table 4.3.2 item 4c (MSIS) with respect to the adequacy of the required surveillance testing. The corrective actions taken were satisfactory. The licensee-identified and corrected violation was treated as a Non-cited Violation, consistent with Section VII.B.1 of the NRC Enforcement Policy and was identified as NCV 389/96-20-01, "Failure to Satisfactorily Test Safety Related Logic Circuits".

E8.2 (Closed) Violation 50-335/95-15-05: Failure to Follow Procedure and Document a Deficiency on Containment Spray Test Procedure (37551)

This violation involved the licensee's failure to properly document an inadequacy in a quarterly containment spray surveillance test. Upon review of the test, the inspector questioned the pre-lubrication of the containment spray valves. The licensee agreed and changed the procedure to delete this practice, but a St. Lucie Action Request (STAR) was not generated as required by procedure. Corrective actions included generating a STAR (STAR 951048), implementing temporary then permanent changes to their procedures to preclude pre-lubrication, and holding two meetings with QA and QC personnel to stress their responsibility for timely identification and documentation of deficiencies. The inspector reviewed the corrective actions and concluded that they were adequate for the specific problem and to preclude similar future violations.

IV. Plant Support

R1 Radiological Protection and Chemistry Controls

R1.1 Control of Radioactive Contamination and Material (83750)

a. Inspection Scope

This review was made to observe licensee controls of radioactive contamination and materials for the purposes of determining whether the licensee was implementing an effective contamination control program through appropriate administrative controls.

b. Observations and Findings

The licensee and the NRC identified problems with the licensee's contamination control program throughout 1996. Several items having low level radioactive contamination levels greater than the licensee's contamination release limits were found outside the Radiation Control Area (RCA). As a result, the licensee had taken various corrective action measures to improve the control of radioactive materials.

However, the licensee identified two additional examples of items having low levels of radioactive contamination outside the licensee's RCA in November 1996. The most recent licensee corrective actions, implemented in November 1996, included the stationing of Radiation Protection (RP) technicians at each of the RCA exits to survey all hand carried tools and equipment of personnel leaving the RCA. The licensee also positioned video cameras and recorders to monitor the primary exit points. The licensee reported that tool monitors had also been ordered to improve future radioactive contamination monitoring capabilities. At the time of the inspection, the licensee had not integrated the program enhancements into controlled procedures and implementation was so recent to prevent any assessment of the corrective measures effectiveness. Throughout the review the inspectors visited the main RCA exit checkpoints and verified that the licensee was monitoring the main RCA exits with video cameras and recorders located in the RP checkpoint offices. The inspectors also verified assigned RP technicians were observing each RCA exit point and surveying all hand carried tools and equipment of personnel leaving the RCA.

The number, type and assessment of Personnel Contamination Events (PCEs) in 1996 were discussed with the Radiation Protection Manager and the results of licensee PCE reviews were reviewed by the inspectors. The licensee had documented approximately 95 PCEs in 1996 with most of those occurring during the Unit 1 Re-Fueling Outage (RFO). The annual goal for 1996 was 78. This compared with 76, 95, and 83 PCEs documented by the licensee for years 1993, 1994, and 1995 respectively. Nearly all of the PCEs occurred during an extended Unit 1 RFO having a length which was nearly double the planned duration. RP personnel had informally reviewed the collective PCEs for causes, trends and corrective actions. The licensee concluded the extended RFO, suspect personnel protective clothing decontamination and a poor cleanup of the Reactor Coolant System (RCS) following reactor shutdown exposed the staff to additional contamination which contributed to the additional number of PCEs.

The inspectors reviewed the licensee's records of RCS concentrations of radioactive Co^{58} during and following the shutdown of the Unit 1 reactor for a 1996 RFO and discussed the licensee's activities for cleanup of the RCS with chemistry and RP personnel. The licensee had routinely monitored the concentration level of Co^{58} in the RCS during and following reactor shutdowns for RFOs. The concentration was monitored while the system was filtered for the purposes of determining when drain down of the RCS could begin without excessive radioactive contamination concerns. In recent RFOs the licensee had been draining the RCS when the concentration of Co^{58} was reduced to approximately 0.1 μCi/ml. However, in the 1996 Unit 1 RFO a decision was made to drain down the RCS when the Co^{58} concentration was approximately 0.4 μCi/ml. Additionally, shortly after drain down was completed the licensee effectively removed the cleanup systems from the RCS preventing any further cleanup of the RCS. The system cleanup was isolated due to various system valve tagouts. When various RCS components were opened RP personnel found elevated contamination and radiation levels.

In discussions with licensee personnel, the inspectors learned the decision to drain down the RCS with a concentration of 0.4 μCi/ml was made to shorten the RFO length by one to two days. The inspector requested a review of the licensee's procedures for the RCS cleanup activities from chemistry personnel. Chemistry personnel reported that the shutdown RCS cleanup processes described above was not procedurally controlled. The licensee did not have procedures to describe or control the activity. The inspectors inquired about the licensee's RCS cleanup plans for the next RFO and learned that the St Lucie staff had recently researched various RCS cleanup procedures utilized in the industry and had formulated a new cleanup process for use during a controlled reactor shutdown which had been effective at other power reactor facilities. A cleanup plan outline had been developed for it's use in the Unit 2 RFO scheduled for April 1997. The inspectors discussed the results of the licensee's industry review of RCS cleanup processes with chemistry personnel. The inspectors also reviewed a licensee document that outlined the planned RCS cleanup process for the 1997 Unit 2 RFO. However, the procedures for the process had not been developed at the time of the inspection. Chemistry personnel reported that while the procedure development had not been initiated the chemistry department planned to have the process procedurally controlled prior to its use.

The licensee utilized a different laundry vendor during the Unit 1 RFO and suspected the vendors processes may not have been as good as previous vendors. The licensee planned to utilize a different laundry vendor for the protective clothing cleaning during the next RFO.

The total plant area contaminated has remained low throughout 1996, varying between 0 and 4,300 ft^2 out of the 104,000 ft^2 included in the licensee's decontamination plan. At the time of the inspection the licensee reported no contaminated floor space within plan areas. However, the licensee excluded the locked high radiation areas, containment, spent fuel pool and boric acid concentrators from the decontamination plan. On tours of the licensee's RCA the inspectors observed the amount of contaminated floor space remained low.

c. Conclusions

While the licensee continued to have problems concerning the contamination control program, the licensee had taken positive measures to improved the program. However, the implementation of these measures was recent and the effectiveness of the licensee's new controls could not be determined.

R1.2 <u>Collective Personnel Dose (83750)</u>

a. Inspection Scope

This area was reviewed to evaluate the status of the licensee's collective dose for 1996.

b. Observations and Findings

The inspectors discussed with licensee personnel and reviewed licensee records of the site 1996 collective doses. The dose for the previous Unit 1 RFO in 1994 was approximately 290 person rem for a 35 day RFO. The 35 day RFO was the licensee's shortest RFO duration. The goal for the 1996 Unit 1 RFO outage was 310 person rem for an estimated 44 day duration. However, the outage was extended to approximately 86 days and 369 person rem was accumulated through the extended outage. The collective dose incurred during the extended RFO also prevented the licensee from meeting the site's annual dose goal of 326 person rem. At the time of the inspection the licensee was approximately 55 person rem above the annual goal with approximately 381 person rem for the year through December 3, 1996. However, it appeared that the 1996 collective dose would still be lower than those observed in recent years. The collective dose totals were 460, 505, and 412 person rems for years 1993, 1994 and 1995 respectively. Proposed goals for 1997 were 675 person rem for the year with an estimated collective dose of 250 person rem estimated for the Unit 1 steam generator replacement project and 210 and 181 person rem for the Unit 1 and 2 RFOs respectively.

c. Conclusions

Failure to make the 1996 annual collective dose goal primarily resulted from significant outage extension.

R2 Status of Radiation Protection and Chemistry Facilities and Equipment

R2.1 Radiation Control Area Clean-Up (83750)

a. Inspection Scope

This area was reviewed to determine the status of the licensee's efforts to reduce the quantity of low level radioactive material in storage within the licensee's RCA.

b. Observations and Findings

In previous NRC inspections, inspectors noted that the quantity of radioactive material in storage appeared to be excessive. Based on discussions with licensee personnel, the inspectors learned that the inventory of contaminated material stored onsite began increasing following the 1995 RFOs. Reductions in resources during that period had resulted in the staff's inability to manage increasing levels of contaminated material. Licensee personnel reported that significant reductions were made in the number of personnel utilized to decontaminate tools and equipment during and following RFOs. As equipment became contaminated the amount of contaminated material in storage continued to increase. Licensee management recognized the levels of stored radioactive materials appeared excessive and began implementing a plan to reduce the quantity of contaminated material onsite during the summer of 1996.

The inspectors reviewed the status of those activities with licensee personnel and toured the RCA to examine the quantity of radioactive material stored in the RCA. The licensee had inventoried and sorted most of the material, tools, and equipment that had been in storage. When possible, the material was decontaminated and surveyed for release as clean material or the contamination levels lowered to permit future use in radiologically controlled areas. Waste material which could not be decontaminated was being processed and packaged for transportation as radioactive waste for further offsite processing and/or disposal.

c. Conclusions

The licensee still had significant inventory of radioactive waste to dispose of and a large inventory of contaminated tools and equipment to control. However, the inspector concluded the licensee had made significant progress in the reduction of stored radioactive material onsite and was continuing to reduce inventories further. As a result of the licensee's recent efforts, the licensee had obtained better control of the radioactive materials in storage onsite.

R5 Staff Training and Qualification in Radiation Protection and Chemistry

R5.1 Radioactive Waste Transportation Training (86750)

a. Inspection Scope

The inspectors reviewed the training provided to the personnel responsible for preparing shipments of radioactive material and waste to verify it was appropriate, met the requirements of 49 CFR 172 Subpart H, and was provided in accordance with licensee procedures.

b. Observations and Findings

In discussions with licensee personnel, the inspectors learned that there were two personnel onsite that were qualified and trained to ship radioactive materials and waste. The inspectors reviewed qualifications and continuing training records for those two individuals and verified that the individuals were qualified to ship radioactive material and had received continuing training though a vendor training program. However, during the review, it was difficult to determine what the St. Lucie training expectations were, in that, Administrative Procedure 0005737, Revision 11, "Health Physics Department Training Program," dated February 16, 1996, did not address specific training requirements for personnel shipping radioactive material. The inspectors also found that there was no approved and controlled training document that fully addressed the following activities:

- Identification of St Lucie personnel responsible for the preparation of radioactive shipments;
- Continuing training requirements for those personnel;

- Scheduling processes: and
- Training documentation and record keeping requirements.

The licensee had addressed some of the above activities in memorandums to files and was completing activities needed to demonstrate personnel were adequately trained. However, training requirements for RP staff were not clearly stated and the process was not well controlled.

c. Conclusions

The training provided to personnel responsible for the transportation of radioactive materials was sufficient and appropriate and licensee personnel responsible for the transportation activities were well qualified to perform the required activities. However, licensee procedures to control the training and qualification processes were weak and lacked sufficient administrative controls to ensure training objectives were consistently implemented.

R5.2 Emergency Preparedness Training Exercise (83750)

a. Inspection Scope

A planned Emergency Preparedness (EP) training exercise was conducted December 5, 1996, and the inspector observed performance of RP personnel assigned to the Operations Support Center (OSC) during the exercise.

b. Observations and Findings

The inspectors focused on RP performance during the review. The inspectors observed the start of the exercise, most of the RP play and the player critique in the OSC following the training exercise.

The inspectors reviewed the licensee's objectives for the exercise and found that the RP staff had met those objectives. The RP supervisor in the OSC was proactive during the drill and anticipated radiological risks appropriately. The radiological controls for the facility and the radiological portion of briefings for dispatched response teams were adequate. The critique identified numerous issues for improvement and the training exercise appeared needed for some of the inexperienced personnel in the OSC.

c. Conclusions

Overall, HP performance in the OSC appeared adequate for the training exercise.

R6 Radiation Protection and Chemistry Organization and Administration

R6.1 Radiation Protection Organizational Changes (83750)

a. Inspection Scope

The inspectors reviewed recent changes in the licensee's RP organization to verify personnel were adequately qualified for assigned responsibilities.

b. Observations and Findings

In discussions with the Radiation Protection Manager and the RP staff, the inspectors determined the RP staff had remained stable in recent months. Two changes occurred during the summer of 1996. A corporate health physicist was assigned to the St. Lucie RP technical staff and a RP technician was transferred to the Work Control Group.

The recently assigned health physicist was working with the radioactive material shipping personnel and was in the process of qualifying as a shipper of radioactive material and had been assisting the staff in the excess radioactive material reduction activities.

RP personnel reported a RP technician recently assigned to the Work Control Group, as a planner, had been a valuable interface between the RP and maintenance work groups. The new planner had added approximately 70 routinely performed RP outage tasks to the outage planning and scheduling process to improve outage work controls and to ensure their proper preparation and implementation. The inspector discussed the planning activities for the upcoming RFO in April 1997, with the RP operations supervisor and the new planner. The RP's planning efforts for the Unit 2 RFO, scheduled for April 1997, were starting earlier than previous RFO preparations and were progressing well.

c. Conclusions

Both personnel were qualified for newly assigned responsibilities and the addition of a RP technician in the Work Control Group with an ALARA background was appropriate.

P1 Conduct of EP Activities

P1.1 Site Evacuation Drill (71750)

a. Inspection Scope

The inspector observed activities relating to a site evacuation drill conducted on December 13.

b. Findings

The licensee's stated goal for the subject drill was to test the ability of site Security to perform accountability functions as described in the licensee's emergency plan. The inspector reviewed the plan and found that the plan was vague with respect to requirements in this area. Specifically, section 5.2.2 of the plan, subsection "Personnel Accountability, Transportation, and Exit Routes," stated:

> "Actual evacuation drills have shown that personnel accountability can be accomplished within about 30 minutes following declaration of an evacuation."

The plan was not specific in defining what personnel accountability entailed or how the 30 minute timeframe would be applied. The licensee stated that accountability was the act of verifying those persons remaining on site following an evacuation order, to include determining who was unaccounted for such that searches might be directed to find unaccounted-for personnel. The 30-minute timeframe was taken to represent the approximate amount of time required to account for personnel after an accountability request was made.

The inspectors toured the site immediately prior to the drill and noted that personnel were pre-staged at both the North and East Security buildings. Approximately 25 individuals were seen congregating around building D-13 and approximately 75 persons were waiting in single file at the north access control point for the drill to begin.

At approximately 2:36 p.m., the drill commenced with a sitewide notice to evacuate. The inspector observed the evacuation from the East Security Building and noted that additional guards responded to all four turnstiles, which had been programmed to allow egress (normally, two turnstiles allow ingress and two egress). The guards were also prepared to take names and badge numbers from individuals having key card difficulties and to process them out manually, thus minimizing delays. By 2:48 p.m., the inspector noted that the majority of plant personnel using the East Security Building for egress had left the site. Processing of personnel off site had been orderly and timely. Security equipment had performed well during a period of high demand.

At 2:59 p.m., Security personnel completed their first accountability review. The inspector observed portions of the review, in which a pre-prepared list of names (representing personnel remaining on site after the drill) was compared with security computer output of personnel still on site. At 3:03 p.m., a second review was completed and the licensee declared the drill complete. Security personnel performing the accountability reviews performed their tasks expeditiously, and independence was achieved through the use of multiple individuals in the verification process.

c. Conclusions

The inspector concluded that the licensee had demonstrated an ability to evacuate the site in an orderly, positively controlled, fashion and that security access control hardware and software was sufficient to obtain accountability lists within 30 minutes of demand. However, the inspector concluded that the licensee had not demonstrated an ability to evacuate the site *and* provide accountability within 30 minutes. This was due to the nonrealism involved in pre-staging individuals prior to the execution of the drill.

X1 Exit Meeting Summary

The inspectors presented the inspection results to members of licensee management at the conclusion of the inspection on January 14, 1997. Interim exit meetings were held on December 5 and December 6 to discuss the findings of region-based inspections. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

M. Allen, Training Manager
W. Bladow, Site Quality Manager
G. Boissy, Materials Manager
H. Buchanan, Health Physics Supervisor
D. Denver, Site Engineering Manager
D. Fadden, Services Manager
R. Heroux, Business Manager
H. Johnson, Operations Manager
J. Marchese, Maintenance Manager
C. Marple, Operations Supervisor
J. Scarola, St. Lucie Plant General Manager
A. Stall, St. Lucie Plant Vice President
E. Weinkam, Licensing Manager
W. White, Security Supervisor

Other licensee employees contacted included office, operations, engineering, maintenance, chemistry/radiation, and corporate personnel.

INSPECTION PROCEDURES USED

IP 37551: Onsite Engineering
IP 61726: Surveillance Observations
IP 62707: Maintenance Observations
IP 71001: Licensed Operator Requalification Program Evaluation
IP 71707: Plant Operations

IP 71714: Cold Weather Preparations
IP 71750: Plant Support Activities
IP 83750: Occupational Radiation Exposure
IP 86750: Solid Radioactive Waste Management And Transportation Of Radioactive Materials
IP 92901: Followup - Plant Operations

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

50-389/96-20-01	NCV	"Failure to Satisfactorily Test Safety Related Logic Circuits"
50-335/95-18-01	VIO	"Failure to Follow Procedures and Maintain Current and Valid Log Entries in the Rack Key Log and Valve Switch Deviation Log"
50-389/95-21-01	VIO	"Failure to Follow Clearance Procedure"
50-389/95-21-02	VIO	"Failure to Follow the Equipment Clearance Order Procedure and Require Independent Verification of TS-Related Component"
50-389/96-005-00	LER	"Operation Prohibited by Technical Specifications Due to Inadequate Surveillance Testing of Reactor Trip Breakers"
50-389/96-006-00	LER	"Operation Prohibited by Technical Specifications Due to Inadequate Surveillance of Auxiliary Feedwater Components"
50-389/96-007-00	LER	"Operation Prohibited by Technical Specifications Due to Inadequate Testing of Main Steam Isolation System Testing Logic"
50-335/95-15-05	VIO	"Failure to Follow Procedure and Document a Deficiency on Containment Spray Test Procedure"

Discussed

50-335,389/EA96-040/VIO-01033	"Change to Procedure as Described in UFSAR Without Safety Evaluation"

LIST OF ACRONYMS USED

AFAS	Auxiliary Feedwater Actuation System
ALARA	As Low as Reasonably Achievable (radiation exposure)
ANPS	Assistant Nuclear Plant Supervisor
AP	Administrative Procedure
ATI	Automatic Test Instrument (in the ESF cabinets)
ATTN	Attention
BAMT	Boric Acid Makeup Tank
CFR	Code of Federal Regulations
CST	Condensate Storage Tank
CVCS	Chemical & Volume Control System
DEH	Digital Electro-Hydraulic (turbine control system)
DPR	Demonstration Power Reactor (A type of operating license)
EDG	Emergency Diesel Generator
EP	Emergency Preparedness
FPL	The Florida Power & Light Company
FR	Federal Regulation
FW	Feedwater
GL	[NRC] Generic Letter
IE	Inspection and Enforcement
IP	Inspection Procedure
IR	[NRC] Inspection Report
JPM	Job Performance Measurement
LCO	TS Limiting Condition for Operation
LER	Licensee Event Report
MSIS	Main Steam Isolation Signal
NCV	NonCited Violation (of NRC requirements)
NLO	Non-Licensed Operator
NPF	Nuclear Production Facility (a type of operating license)
NPS	Nuclear Plant Supervisor
NRC	Nuclear Regulatory Commission
NWE	Nuclear Watch Engineer
OOS	Out Of Service
OP	Operating Procedure
OSC	Operations Support Center
PCE	Personnel Contamination Event
PDR	NRC Public Document Room
PMAI	Plant Management Action Item
PWO	Plant Work Order
QA	Quality Assurance
QC	Quality Control
QSL	Quality Surveillance Letter
RCA	Radiation Control Area
RCS	Reactor Coolant System
REA	Request for Engineering Assistance
RFO	Refueling Outage
RII	Region II - Atlanta, Georgia (NRC)
RP	Radiation Protection
RWST	Refueling Water Storage Tank
RWT	Refueling Water Tank
SE	Safety Evaluation

SNPO	Senior Nuclear Plant [unlicensed] Operator
SRO	Senior Reactor [licensed] Operator
St.	Saint
TCB	Trip Circuit Breaker
TS	Technical Specification(s)
UFSAR	Updated Final Safety Analysis Report
USNRC	United States Nuclear Regulatory Commission
VIO	Violation (of NRC requirements)
WO	Work Order