U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos: 50-335, 50-389
License Nos: DPR-67, NPF-16

Report Nos: 50-335/98-10, 50-389/98-10

Licensee: Florida Power & Light Co.

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

Location: 6351 South Ocean Drive
Jensen Beach, FL 34957

Dates: September 20 - October 31, 1998

Inspectors: T. Ross, Senior Resident Inspector
D. Lanyi, Resident Inspector
G. Warnick, Resident Inspector - In Training

Approved by: L. Wert, Chief
Reactor Projects Branch 3
Division of Reactor Projects

Enclosure

EXECUTIVE SUMMARY

St. Lucie Nuclear Plant, Units 1 & 2
NRC Inspection Report 50-335/98-10, 50-389/98-10

This integrated inspection included aspects of licensee operations, engineering, maintenance, and plant support. The report covers a 6-week period of resident inspection.

Operations

- An infrequent evolution to shift main feedwater flow control from the 1B main feed regulating valve to the bypass valves to allow for online repairs was well controlled and accomplished without incident. Operating crew preparation, briefing, and performance were exemplary (Section O1.2).

- Safety-related systems were properly aligned, including valve and breaker positions, and maintained consistent with applicable drawings, procedures, and Technical Specifications. Equipment operability, material condition, and housekeeping were acceptable (Sections O2.2).

- The licensee has implemented extensive corrective actions to prevent recurrence of past clearance-related problems. Equipment clearance orders were being processed in accordance with program requirements and management expectations. The Clearance Center was at first reconfigured, and then incorporated into the One Stop Shop, to provide a controlled environment conducive to generating quality. Responsible personnel were knowledgeable and sensitive to the critical importance of an effective clearance process for ensuring personnel, equipment and nuclear safety (Section O8.2).

Maintenance

- Maintenance and surveillance testing activities were performed in accordance with work instructions, procedures, and applicable clearance controls. Work performed during these activities was accomplished by knowledgeable and experienced personnel who exhibited familiarity with their specific tasks. The work package or procedure was routinely present and in active use at the work site. Maintenance supervision and site engineering staff were closely involved with the maintenance work. Good interface between maintenance and operations personnel was observed, particularly during the feedwater maintenance evolutions. Work activities were properly documented and problems were appropriately resolved (Section M1.1).

- In general, Critical Maintenance Management (CMM) evolutions were well planned and executed. Maintenance pre-job briefs were thorough, focused on safety, and took advantage of prior operating experience events. Operations, maintenance and engineering personnel worked together well to successfully accomplish CMM activities. Supervisory and/or engineering personnel provided consistent oversight and support.

Maintenance activities were conducted in accordance with applicable instructions and procedures, and appropriately documented (Sections M1.2 and 1.3).

Engineering

- Plant Change/Modification (PC/M) 976-031, Generic Letter 96-06 Thermal Pressurization Relief Valves had good was pre- planning. The package was detailed and complete, including the justification for the modification, and post-installation testing requirements. Pipe stress calculations were clear and accurate. All assumptions and references were clearly stated (Section E1.1).

- Failure to adequately test certain engineered safeguards actuation system relays required by technical specifications was identified and reported in a timely manner by the licensee. . Appropriate corrective actions were developed and fully implemented. A non-cited violation was identified for this event (Section E8.1)

Plant Support

- Overall coordination and control of the Unit 2 spent resin transfer activities by Health Physics (HP) were very effective and exhibited a high degree of attention to all details of this evolution. Numerous radiological precautions were taken during the preparation phase to prevent inadvertent spills and limit personnel exposures. Personnel from HP and Operations organizations worked closely together to ensure a successful transfer (Section R1.1).

- Security and plant personnel performed their responsibilities in a manner consistent with site security plan requirements. Overall, security facilities and equipment were operating well and maintained in a condition to ensure physical protection of the plant (Sections S1.1 and S2.1).

- The licensee's first emergency planning drill of their newly developed Severe Accident Management Guidelines (SAMG) was a useful training experience for the emergency response organization. Recommendations were properly reviewed, clarifying details were requested, corrections made as necessary, and proper authorization was granted to implement them (Section P1.1).

Report Details

Summary of Plant Status

Both units remained at essentially full power during the entire report period, except for several brief unplanned downpowers by Unit 1. On September 14, Unit 1 rapidly reduced power to 60% due to a large influx of jellyfish in the intake canal. The unit also reduced power to 93% on September 18 for the same reason. On October 17, Unit 1 reduced power to 85% per Technical Specifications (TS) due to a Digital Data Processing System (DDPS) printer failure. In all three cases the unit was returned to full power operation by the next day.

I. Operations

O1 Conduct of Operations

O1.1 Routine Observations of Control Room Operations (71707)

Using inspection procedure (IP) 71707, the inspectors conducted frequent tours of the Main Control Room (MCR) of both units during plant operations to verify proper staffing, operator attentiveness, adherence to procedures, communications, and command and control of activities.

Control Room conduct was professional and demonstrated good team work. Three part communications were consistently used. Operators demonstrated a high level of control and awareness of plant status. Attentiveness to annunciator alarms and response to changing plant conditions were prompt and effective. Command and control and Operations supervisory oversight were clearly evident.

The inspectors routinely reviewed plant operator logs and night orders. The logs were detailed and contained the required information. New night orders were issued daily and contained detailed information about upcoming activities, recent events, and other announcements affecting the operators. The inspectors concluded that these night orders were very useful in communicating information from Operations management to onshift and oncoming crews.

O1.2 Shifting Main Feedwater Flow From the 1B Main Feed Regulating Valve to the 100 Percent and 15 Percent Bypass Valves

a. Inspection Scope (71707)

On September 29, Operations shifted the main feedwater flow from the 1B Main Feed Regulating Valve (MFRV) to the 100 percent and the 15 percent main feed bypass valves to allow maintenance on the MFRV. The inspector observed the pre-evolution brief and the evolution.

b. Observations and Findings

The inspector reviewed the licensee's preparations for the evolution. The 1B MFRV had been causing significant (approximately ½ percent) swings in the secondary calorimetric due to flow control oscillations, that appeared to be getting worse. Plant management evaluated the repair options to correct the problem, and decided that an at-power repair was the conservative decision. The operations crew that was assigned to perform the valve swap was given extra simulator training on the evolution, including multiple potential failure scenarios. Additionally, the other crews (peak shift and mid shift) were also given some additional training in case their crew assumed the watch with the MFRV still out of service. The inspector noted that all crew members were more familiar with the evolution after the training.

The Assistant Nuclear Plant Supervisor (ANPS) conducted a pre-job briefing with the crew and maintenance personnel in the Unit 1 control room. The brief was detailed and covered a number of continency actions based upon potential problems. The ANPS actively kept all attendees engaged in the brief. Several members of the brief added significant information. The brief concluded by reviewing recent operating experience reports from the industry and clearing up any questions.

The actual evolution was performed in accordance with OP 1-0700020, Revision 68, Condensate and Feedwater System - Normal Operation in a deliberate and well controlled manner. The ANPS maintained command of the control room environment during the entire evolution. Miscellaneous noise was minimized, and non-essential personnel were kept out of the control room. Three part communications among the operators were consistently good. Main feedwater flow was maintained during the entire transfer from automatic MFRV flow control to manual bypass and back again without incident.

c. Conclusion

The infrequent evolution to shift main feedwater flow control from the 1B main feed regulating valve to the bypass valves to allow for online repairs was well controlled and accomplished without incident. Operating crew preparation, briefing, and performance were exemplary.

O2 Operational Status of Facilities and Equipment

O2.1 General Tours of Safety-Related Areas (71707)

General tours of safety-related areas were performed by the inspectors throughout both units to examine the physical condition of plant equipment and structures, and to verify that safety systems were properly maintained and aligned. These general walkdowns included the accessible portions of safety-related structures, systems, and components (SSC).

Overall material conditions for Unit 1 and Unit 2 SSCs were good. Minor equipment and housekeeping problems identified by the inspectors during their routine tours were reported to the responsible NPS, ANPS and/or maintenance department for resolution. Corrective actions and/or Condition Reports (CRs) were implemented to address these items.

O2.2 Safety Related System Walkdowns (71707)

The inspectors performed a walkdown of accessible mechanical and electrical portions of the 1A EDG, and interviewed responsible operations personnel regarding system status. The inspectors verified that the system configuration, including valve and breaker positions, was consistent with applicable system drawings and lineup procedures. Equipment operability, material condition, and housekeeping were acceptable.

The inspectors performed a limited walkdown of the 2B High Pressure Safety Injection System, 2B Low Pressure Safety Injection System, 2B Containment Spray System, and the Unit 2 Refueling Water Tank area after the licensee completed their planned outage of the 2B Emergency Core Cooling System. The inspectors identified no discrepancies.

The inspectors performed a walkdown of both units' AC and DC electrical distribution systems, including a review of the Final Safety Analysis Report (FSAR) and the applicable plant procedures. The inspectors noted only a few minor labeling discrepancies which were promptly addressed by the licensee. Cleanliness of the areas was adequate.

The inspectors performed a walkdown of the accessible portions of the Unit 1 RAB ventilation system. No discrepancies were identified.

O8 Miscellaneous Operations Issues (92901)

O8.1 (Closed) LER 50-335/96-002-00: Manual Reactor Trip During Unit Shutdown Following Dropped Control Element Assembly. The event associated with the subject LER was described in detail, including corrective actions, in Inspection Report 96-04. No additional information was required to be reviewed. This item is closed.

O8.2 Review of Equipment Clearance Order Process

(Closed) VIO 335,389/98-06-01 Repeat Failure to Implement an Equipment Clearance Order Prior to Beginning Work

(Closed) VIO 335/97-14-03 Failure to Properly Execute Equipment Clearance Orders

a. Inspection Scope (71707 and 92901)

The inspector reviewed the subject violations and all corrective actions. Additionally, the inspector performed an in-depth review of the licensee's Equipment Clearance Order

(ECO) program to determine the extent that the licensee has assimilated the "zero defect" clearance philosophy.

b. Observations and Findings

Since January 1997, the inspectors have identified several examples of inadequate implementation of the ECO program. In each case, the licensee immediately corrected the specific causes and implemented some generic corrective actions. As a result of the repeat violation, the licensee identified that the common causes among most of the errors were due to personnel inattention to detail and procedural inadequacies. The licensee identified five generic corrective actions necessary to reduce the possibility of future ECO errors.

First, the licensee held stand down meetings with Operations personnel to discuss the need for compliance with the clearance procedure. Also, Operations Management reminded their personnel of the need to maintain a questioning attitude in all aspects of work, but especially when developing clearance boundaries and hanging clearance tags. The inspectors attended several of these meetings. Operators appeared to understand and recognized the importance of these discussions. The meetings were completed by June 15.

Second, the licensee identified a significant portion of the missed clearance procedure barriers occurred during initial development and verification of the clearance request. The licensee rearranged the clearance center in order to segregate the work area for developing and verifying clearances from the general traffic. The inspectors toured the modified Clearance Center. Then, in mid-October, the Clearance Center moved from its former area in the Unit 1 turbine building into the one-stop shop (OSS) in the South Service Building. The Clearance Center was the first group to move into the new OSS. A separate, dedicated area was set up in the OSS to ensure that clearance developers would not be unnecessarily distracted while performing their work. The inspectors toured the OSS spaces, observed portions of the development of a clearance, and found that the work area would allow for an undisturbed environment.

Third, the licensee increased the staffing of the Clearance Center. The inspectors verified that there were two full-time Senior Reactor Operator (SRO) licensed operators, one Reactor Operator (RO) licensed operator, one Non-licensed Operator (NLO), and an Assistant Nuclear Plant Supervisor (ANPS) permanently assigned to the Clearance Center. The inspectors interviewed all the licensed personnel. All personnel had been in their current positions for several months, and all were knowledgeable about the details of the clearance process and clearance procedure. Each operator understood that every detail of the process must be performed error-free to protect plant equipment and, more importantly, plant personnel. All personnel interviewed agreed that there was a steep learning curve when first coming to the Clearance Center. The details of the procedure were understood by few personnel outside the Clearance Center.

Fourth, a magnetized sign was developed outlining the basic steps of the clearance process. This was posted in the Clearance Center and in, the control rooms. The inspector verified that this operator aid was posted and accurate. The ANPSs and operators were observed to periodically review the placard when performing clearance related activities in the control rooms.

Fifth, the licensee reinforced management expectations to Maintenance personnel to verify clearance boundaries. The inspectors observed several different maintenance activities involving clearances throughout the period. In each case the supervisor and at least one of the journeymen involved in the work verified adequate boundaries prior to beginning work. Discussions with the workers revealed that they clearly understood management's expectations.

The inspectors observed portions of multiple clearances being processed. Clearance requests coming into the Clearance Center were generally acceptable to the operators assigned to develop the clearance. Those that were not, were returned to the originator with comments. Clearance Center personnel were conscientious in their work and exhibited a good questioning attitude. The licensee routinely considered TS implications, operating procedure compliance, nuclear safety implications, and risk implications. The verification process in the Clearance Center was thorough and in accordance with procedures. The inspectors also noticed that the Clearance Center routinely maintained notes of anything abnormal that was identified while researching the clearance to help anyone else reviewing the clearance at a future time.

The inspectors observed Operations hanging and removing numerous clearances tags. All operators were observed to be performing the function in accordance with procedures. Several pre-evolution briefs were observed. The information presented at the briefs clearly described how the affected equipment was to be taken out of service and the way to implement the tagout. Additionally, the inspectors observed a boundary modification and release for test. Both evolutions were completed in accordance with procedures.

Based upon the extensive corrective actions completed by the licensee, these violations are closed.

c. Conclusions

The licensee has implemented extensive corrective actions to prevent recurrence of past clearance-related problems. Equipment clearance orders were being processed in accordance with program requirements and management expectations. The Clearance Center was at first reconfigured, and then incorporated into the One Stop Shop, to provide a controlled environment conducive to generating quality. Responsible personnel were knowledgeable and sensitive to the critical importance of an effective clearance process for ensuring personnel, equipment and nuclear safety. The subject violations are closed.

II. Maintenance

M1 Conduct of Maintenance

M1.1 Maintenance and Surveillance Observations (IP 61726 and 62707)

a. Inspection Scope

The inspectors observed all or portions of the following corrective maintenance, preventive maintenance, and surveillance testing activities:

- Operating Procedure (OP) 1-0420050, Containment Spray - Periodic Test
- Work Order (WO) 98018023, 1B Main Feed Regulating Valve Maintenance
- Plant Work Order (PWO) 4443, 2A Main Feed Isolation Valve Preventive Maintenance
- PWO 4444, 2B Main Feed Isolation Valve Preventive Maintenance
- OP 2-0810051, Main Steam / Feedwater Isolation Valves Periodic Test
- Instrumentation and Control Procedure (ICP) 2-0700052, Auxiliary Feedwater Actuation System Actuation Relay Test
- Normal Operating Procedure (NOP) 1-2000020, Containment Cooling System Operation - Monthly Test
- ICP 1-1400198, Reactor Protection System Variable High Power Channel Quarterly Calibration

b. Observations, Findings, and Conclusions

All observed maintenance work and surveillance testing were performed in accordance with work instructions, procedures, and applicable clearance controls. Work performed during these activities was accomplished by knowledgeable and experienced personnel who exhibted familiarity with their specific tasks. The work package or procedure was routinely present and in active use at the work site. The inspectors frequently observed that maintenance supervision and site engineering staff were closely involved with the maintenance work. Good interface between maintenance and operations personnel was observed, particularly during the feedwater evolutions. The inspectors also observed that work activities were properly documented and problems encountered during the performance of the work activities were appropriately resolved.

M1.2 2A Emergency Diesel Generator (EDG) Maintenance Outage

a. Inspection Scope (62707)

The inspectors observed portions of the 2A EDG Critical Maintenance Management (CMM) outage performed by maintenance and operations personnel. Discussions were also held with system engineering and work control individuals regarding Maintenance Rule implications.

b. Observations and Findings

On October 7, the inspectors attended the pre-job briefing conducted by the Nuclear Plant Supervisor (NPS). The NPS discussed the details of the EDG CMM Checklist, contained in Administrative Procedure (AP) 0010460, Rev. 13. The NPS and the system component engineer effectively addressed the scope of the CMM and discussed safety precautions and past industry events relating to the maintenance activity.

The inspectors observed the conduct of EDG CMM activities on October 8 and 9. Equipment Clearance Order 2-98-09-283 was walked down by the inspectors and found to be properly implemented, and established the necessary clearance boundary for the planned maintenance scope. The numerous individual maintenance activities and post-maintenance testing (PMT) conducted as part of the CMM were well coordinated with nearly continuous supervisory and/or engineering oversight and support. Housekeeping and personnel safety were well maintained in the EDG building for the duration of the CMM. The inspectors reviewed applicable work orders, drawings, and procedures and verified that they were properly used to complete the different maintenance tasks and PMTs. Effective use of foreign material exclusion, maintenance and test equipment controls, and QC inspection were also observed.

Overall, the entire CMM appeared to be well planned and executed. Out of service (OOS) time for the 2A EDG was minimized, and the CMM accomplished as scheduled except for some emergent work associated with the replacement of a starting air receiver check valve. In addition to reviewing the CMM schedule and observing the actual maintenance activities, the inspectors examined the 2A EDG CMM for ensuring decreased equipment availability due to online preventive maintenance (PM) was balanced by increased reliability. Section 3.2 of AP-0010460, Rev. 13, Critical Maintenance Management, states that, "Equipment required by a Technical Specification LCO may be voluntarily taken out of service for preventative maintenance if the increased safety risk during the period in which the equipment is unavailable due to maintenance is offset by the decreased safety risk attributable to the improved reliability of the equipment following maintenance or if in management's qualitative judgement, the increased safety risk can be offset by appropriate contingencies and increased oversight." The inspectors reviewed the qualitative assessment performed by the responsible system engineer in accordance with section 8.6 of AP-0010460. However, this assessment lacked sufficient detail for the inspectors to conclude that the increased 2A EDG unavailability was appropriately balanced by increased reliability. Subsequent discussions with onsite engineering and maintenance personnel also did not explain how the online PM activities during the 2A EDG CMM had been managed in a way to effectively optimize OOS time and reliability consistent with AP-0010460.

Even though the total planned unavailability for the 2A EDG from this CMM (i.e., 19 hours), and from the upcoming Unit 2 refueling outage (about 140 hours), was well within the site specific maintenance rule performance criteria of 240 hours per year per EDG, the inspectors could not ascertain that the licensee had provided appropriate justification for voluntary entry into the 2A EDG TS LCO in accordance with the procedure. Further

inspection is required in this area to determine if the 2A EDG CMM was adequately justified per the licensee's CMM program, this additional inspection effort will be tracked by Inspector Follow up Item (IFI) 50-335,389/98-10-01, "CMM Scheduling Practices."

c. Conclusions

The inspectors observed that the maintenance pre-job brief conducted by the NPS was thorough and focused on safety. Operations, maintenance and engineering personnel worked together well to successfully accomplish all of the 2A EDG CMM activities. Supervisory and/or engineering oversight and support were constant factors throughout the maintenance evolution. Maintenance activities were conducted in accordance with applicable instructions and procedures, and appropriately documented. An IFI was opened to further investigate a potential problem regarding CMM scheduling practices.

M1.3 2B Emergency Core Cooling System Maintenance Outage

a. Inspection Scope (62707)

The inspector observed portions of the planned CMM outage on the 2B Emergency Core Cooling System (ECCS) from October 13 through October 14. The inspector also conducted discussions with Operations, Maintenance, Engineering, and Work Controls.

b. Observations and Findings

The inspector attended several planning sessions for the CMM throughout the report period, and attended the combined pre-job brief for Operations and Maintenance on October 13. The planning sessions were attended by personnel from the appropriate organizations and many potential technical and scheduling problems were addressed. The pre-job brief was led by the NPS and included the scope of the work to be performed, the applicable Limiting Conditions for Operation (LCOs), identification of the major participants, precautions and limitations, and concluded with an in-depth review of past industry problems.

The inspector observed portions of the CMM in which over twenty work orders were closed, most of which appeared to be routine PM items that could have been scheduled during the upcoming outage. The inspector discussed the large number of PM items worked online in light of the Unit 2 outage scheduled for three weeks later. The licensee asserted that the CMM enhanced the reliability of the Low Pressure Safety Injection (LPSI) system, and ensured the reliability of shutdown cooling for the early part of the outage. However, the qualitative assessment developed per section 8.6 of AP-0010460, lacked sufficient detail for the inspectors to conclude that the increased equipment unavailability was appropriately balanced by increased reliability as described in the procedure. Subsequent interviews with onsite engineering were not successful in explaining how the CMM's increased safety risk would be offset by improved equipment performance. This issue is identified as another example of IFI 50-335,389/98-10-01, "CMM Scheduling Practices," (see section M1.2 above).

Overall, the inspector found the work to be performed by knowledgeable personnel. The inspector observed that procedures were actively used. Supervisors and Engineering support was often observed in the field. The inspector reviewed the applicable Equipment Clearance Orders, 2-98-10-104, 2-98-10-105, and 2-98-10-107. The boundaries were technically adequate and the clearance implementation was administratively correct. After completion of the CMM, the inspector walked down the effected equipment and ensured that it was properly returned to service.

c. Conclusions

The licensee successfully completed the maintenance activities scheduled for the 2B ECCS CMM. Maintenance workers were knowledgeable of their tasks and completed their work in accordance with applicable procedures. A second example of an Inspection Followup Item was identified regarding CMM scheduling practices.

III. Engineering

E1 Conduct of Engineering

E1.1 Review of Unit 2 Generic Letter 96-06 Modifications (37551)

The inspectors reviewed Plant Change/Modification (PC/M) 976-031, Generic Letter 96-06 Thermal Pressurization Relief Valves. The licensee planned to install eight relief valves on seven separate containment penetrations during the upcoming unit 2 outage. The PC/M was planned well in advance and materials required to perform the upgrade had already been received. The package was detailed and complete, including the justification for the modification, and post-installation testing requirements. The inspectors reviewed several pipe stress calculations associated with the planned modifications. The calculations were clear and accurate. All assumptions and references were obviously stated. The inspectors found the modification packages to be well prepared and the calculations properly performed.

E8 Miscellaneous Engineering Issues

E8.1 (Closed) Licensee Event Report 50-389/97-006-00: Operation Prohibited by Technical Specifications Due to Inadequate Surveillance Testing of Engineered Safety Features.

a. Inspection Scope (92903)

The inspector reviewed the subject LER and its associated corrective actions.

b. Observations and Findings

On June 30, 1997, the licensee identified, through GL 96-01 reviews, a discrepancy regarding the Unit 2 Technical Specification (TS) requirements for the Engineered Safety Feature Actuation System (ESFAS) subgroup relays. TS 4.3.2.1 required that all ESFAS

subgroup relays not specifically exempted in UFSAR table 7.3-9a shall be tested semi-annually. Engineering identified two relays, K512A and K612A, that were not exempted, but only tested during refueling outages during performance of the Engineered Safety Feature periodic test.

These two relays secure the containment purge fans and close the containment purge isolation valves upon a receipt of a Containment Isolation Actuation Signal (CIAS). The inspector verified that during normal reactor operations, the purge fans are deenergized and TS 3.6.1.7 specifically required the valves to be sealed shut. As such, the containment purge fans and isolation valves were consistently being maintained in their CIAS required condition during plant operation. These relays had been successfully tested in May 1997 during the last refueling outage.

The licensee identified that the surveillance procedure was inadequate. The justification to not test the two relays was based upon the TS 3.6.1.7 requirement and the procedural requirements to maintain the fans secured. The inspector reviewed the corrective actions and found that the licensee has completed their Generic Letter 96-01 review program, and has taken corrective actions as required for all their findings. Additionally, the licensee completed training for key maintenance personnel and site engineering personnel about verbatim compliance with TS requirements.

The licensee had planned to change the surveillance procedures to ensure that these relays were tested as required. However, prior to the next required test, a TS revision changed the requirement to perform testing of subgroup relays every 18 months on a staggered test basis. Since both of these relays are in the same subgroup, this allowed testing each refueling outage. The inspector reviewed the current surveillance procedure and verified that it met the TS requirements.

TS 4.3.2.1 required that all ESFAS subgroup relays not specifically exempted in FSAR table 7.3-9a shall be tested semi-annually. The licensee failed to test these two relays at this interval from initial startup until June 30, 1997. This non-repetitive, licensee identified and corrected violation is being treated as a Non-Cited Violation (NCV) consistent with section VII.B.1 of the NRC Enforcement Policy and is identified as NCV 50-389/98-10-02, Failure to Adequately Test ESFAS Relays as required by Technical Specifications.

c. Conclusions

Failure to adequately test certain engineered safeguards actuation system relays required by technical specifications was identified and reported in a timely manner by the licensee. Appropriate corrective actions were developed and fully implemented. A non-cited violation was identified for this event.

IV. Plant Support

R1 Radiological Protection and Chemistry Controls

R1.1 Transfer Of Spent Ion Exchanger Resin To Transportation Container

On October 9, the inspectors observed licensee preparations to transfer spent resin from the 2A Purification Ion Exchanger into a liner within a transportation container staged outside the Unit 2 auxiliary building. In-plant valve lineups to transfer the resin were conducted in accordance with OP No. 2-0520020, Revision 25, Radioactive Resin Replacement. Spent resin dewatering system alignments and checkouts were conducted using OM-048-WS, Revision 1, the operating procedure for resin drying (i.e., dewatering). In addition to plant lineups and system checkouts, a flow path verification flush was accomplished to ensure transfer path integrity. Numerous radiological precautions were taken during the preparation phase to prevent inadvertent spills and limit personnel exposures. Personnel from the Health Physics (HP) and Operations organizations worked closely together to ensure a successful transfer. Overall coordination and control of the spent resin transfer activities by HP were very effective and exhibited a high degree of attention to details of this evolution. Although, minor equipment problems delayed the actual transfer until the next day, the inspectors met with the responsible HP staff who confirmed it had been accomplished without incident.

R2 Status of Radiation Protection and Chemistry Facilities and Equipment

R2.1 Radiologically Controlled Area, Units 1 and 2 (71750)

The inspectors routinely conducted tours in the Unit 1 and 2 radiological controlled area (RCA). In general, the RCA was maintained clear, clean of debris, and in order. High radiation areas were properly posted and locked. Plant personnel observed working in the RCA demonstrated appropriate knowledge and application of radiological control practices. HP technicians provided positive control and support of work activities in the RCA. Preparations for the upcoming Unit 2 refueling outage were apparent but did not adversely affect control of the RCA.

P1 Conduct of Emergency Planning Activities (71750)

P1.1 Emergency Planning Drill Using Severe Accident Management Guidelines

On October 15, the inspectors participated in the licensee's first emergency planning (EP) drill of their newly developed Severe Accident Management Guidelines (SAMG). An inspector had observed prior SAMG tabletop training of selected personnel from the emergency response organization (ERO), This was the first time the licensee actually exercised the SAMGs during an onsite EP drill with the entire ERO. The inspectors have regularly participated as players during EP drills. This particular drill did not include offsite involvement by state and county officials, it only involved the licensee's ERO and

facilities. Overall, the drill went reasonably well and was considered a useful training experience for the emergency response organization. The problem solving team submitted several recommendations to the emergency coordinator regarding specific beyond design basis actions for cooling the reactor vessel and maintaining containment integrity. These recommendations were properly reviewed, clarifying details were requested, corrections made as necessary, and proper authorization was granted to implement them.

S1 Conduct of Security and Safeguards Activities

S1.1 Routine Observations of Plant Security Measures (71750)

During routine inspection activities, the inspectors verified that portions of site security program plans were being implemented. Plant personnel were observed as they processed through the east security building into the protected area (PA). The display of picture badges and key carding of vital area doors was also monitored. Security guards were observed during their routine tours of plant areas and during their searches of vehicles at the east security building gate. In all observed aspects, security and plant personnel performed their responsibilities in a manner consistent with site security plan requirements.

S2 Status of Security Facilities and Equipment

S2.1 Security Facilities and Equipment Tours (71750)

The inspectors conducted tours of the central alarm station (CAS), vital areas, and portions of the protected area (PA) boundary. All security equipment (e.g., computer alarm system, video cameras, communications) appeared to be functioning well. Vital area doors operated properly, and PA physical boundaries and detection systems were in good condition. Overall, security facilities and equipment observed by the inspectors were operating well and maintained in a condition to ensure physical protection of the plant.

V. Management Meetings and Other Areas

X1 Exit Meeting Summary

The inspectors presented the inspection results to members of licensee management at the conclusion of the inspection on October 30, 1998. 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. Operations Manager
C. Bible, Site Engineering Manager
G. Bird, Security Manager
W. Bladow, Site Quality Manager
G. Casto, Emergency Preparedness Supervisor
D. Fadden, Training Manager
J. Holt, Maintenance Manager
H. Jacobs, Mechanical Maintenance Supervisor
W. Korte, Electrical Maintenance Supervisor
C. Ladd, Operations Supervisor .
K. Mohindroo, Plant Engineering Manager
T. Patterson, System Engineering Manager
A. Pawley, I&C Maintenance Supervisor
A. Scales, Assistant Operations Supervisor
A. Stall, St. Lucie Plant Vice President
E. Weinkam, Licensing Manager
C. Wood, Work Control Manager
R. West, St. Lucie Plant General Manager

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 71707:	Plant Operations
IP 71750:	Plant Support Activities
IP 92700:	Onsite Followup of Written Reports of Nonroutine Events at Power Reactor Facilities
IP 92901:	Followup - Plant Operations

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-335, 389/98-10-01	IFI	CMM Scheduling Practices (Section M1.2)
50-389/98-10-02	NCV	Failure to Adequately Test ESFAS Relays as required by Technical Specifications (Section E8.1)

Closed

50-389/98-10-02	NCV	Failure to Adequately Test ESFAS Relays as required by Technical Specifications (Section E8.1)
50-335, 389/98-06-01	VIO	Repeat Failure to Implement an Equipment Clearance Order Prior to Beginning Work (Section O8.2)
50-335/97-14-03	VIO	Failure to Properly Execute Equipment Clearance Orders (Section O8.2)
50-389/97-006-00	LER	Operation Prohibited by Technical Specifications Due to Inadequate Surveillance Testing of Engineered Safety Features (Section E8.1)
50-335/96-002-00	LER	Manual Reactor Trip During Unit Shutdown Following Dropped Control Element Assembly (Section O8.1)