
ENCLOSURE 2
SALP BOARD REPORT

U.S. NUCLEAR REGULATORY COMMISSION
REGION II

SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

INSPECTION REPORT NUMBERS

335/85-02 and 389/85-02

Florida Power and Light Company

St. Lucie Plant Units 1 and 2

July 1, 1983 through October 31, 1984

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I. INTRODUCTION

The Systematic Assessment of Licensee Performance (SALP) program is an integrated NRC staff effort to collect available observations and data on a periodic basis and to evaluate licensee performance based upon this information. SALP is supplemental to normal regulatory processes used to ensure compliance to NRC rules and regulations. SALP is intended to be sufficiently diagnostic to provide a rational basis for allocating NRC resources and to provide meaningful guidance to the licensee's management to promote quality and safety of plant construction and operation.

An NRC SALP Board, composed of the staff members listed below, met on January 10, 1985, to review the collection of performance observations and data and to assess the licensee's performance in accordance with the guidance in NRC Manual Chapter 0516, "Systematic Assessment of Licensee Performance." A summary of the guidance and evaluation criteria is provided in Section II of this report.

This report is the SALP Board's assessment of the licensee's safety performance at the St. Lucie Plant for the period July 1, 1983 through October 31, 1984.

SALP Board for St. Lucie Plant:

- J. A. Olshinski, Director, Director of Reactor Projects (DRP), Region II (RII) (Chairman)
- A. F. Gibson, Acting Director, Division of Reactor Safety, RII
- J. P. Stohr, Director, Division of Radiation Safety and Safeguards, RII
- V. L. Brownlee, Chief, Projects Branch 2, DRP, RII
- A. C. Thadani, Chief, Reliability and Risk Assessment Branch, Division of Safety Technology, Office of Nuclear Reactor Regulations (NRR)

Attendees at SALP Board Meeting:

- S. A. Elrod, Chief, Projects Section 2C, DRP, RII
- K. D. Landis, Chief, Technical Support Staff (TSS), DPR, RII
- C. Feierabend, Senior Resident Inspector, St. Lucie, DRP, RII
- P. Bibb, Resident Inspector, St. Lucie, DRP, RII
- K. M. Jenison, Project Engineer, Project Section 2A, DRP, RII
- D. S. Price, Reactor Inspector, TSS, DRP, RII
- T. C. MacArthur, Radiation Specialist, TSS, DRP, RII
- D. E. Sells, Project Manager, Operating Reactors Branch 3, Division of Licensing, NRR

II. CRITERIA

Licensee performance is assessed in selected functional areas, depending upon whether the facility was in a construction, preoperational, or operating phase. Each functional area represents areas which are significant to nuclear safety and the environment, and which are programmatic

areas. Some functional areas may not be assessed because of little or no licensee activities or lack of meaningful observations. Special areas may be added to highlight significant observations.

One or more of the following evaluation criteria were used to assess each functional area.

- A. Management involvement and control in assuring quality
- B. Approach to resolution of technical issues from a safety standpoint
- C. Responsiveness to NRC initiatives
- D. Enforcement history
- E. Reporting and analysis of reportable events
- F. Staffing (including management)
- G. Training effectiveness and qualification

However, the SALP Board is not limited to these criteria and others may have been used where appropriate.

Based upon the SALP Board assessment, each functional area evaluated is classified into one of three performance categories. The definition of these performance categories are:

Category 1: Reduced NRC attention may be appropriate. Licensee management attention and involvement are aggressive and oriented toward nuclear safety; licensee resources are ample and effectively used so that a high level of performance, with respect to operational safety or construction is being achieved.

Category 2: NRC attention should be maintained at normal levels. Licensee management attention and involvement are evident and are concerned with nuclear safety; licensee resources are adequate and are reasonably effective so that satisfactory performance with respect to operational safety or construction is being achieved.

Category 3: Both NRC and licensee attention should be increased. Licensee management attention or involvement is acceptable and considers nuclear safety, but weaknesses are evident; licensee resources appear to be strained or not effectively used so that minimally satisfactory performance with respect to operational safety or construction is being achieved.

The SALP Board has also categorized the performance trend over the course of the SALP assessment period. The trend is meant to describe the general or prevailing tendency (the performance gradient) during the SALP period. This

categorization is not a comparison between the current and previous SALP ratings. It is a determination of the performance trend during the current SALP period irrespective of performance during previous SALP periods. The categorization process involves a review of performance during the current SALP period and categorization of the trend of performance which occurred during the course of that period. The performance trends are defined as follows:

Improving: Licensee performance has generally improved over the course of the SALP assessment period.

Constant: Licensee performance has remained essentially constant over the course of the SALP assessment period.

Declining: Licensee performance has generally declined over the course of the SALP assessment period.

III. SUMMARY OF RESULTS

Overall Facility Evaluation

St. Lucie was a well-managed site, with a technically competent and professional staff. Major strengths were identified in the areas of plant operations, radiological controls, maintenance, surveillance, emergency preparedness, security and safeguards, refueling and licensing activities. No major weaknesses were identified. Management involvement at all levels has contributed to the high level of plant performance and to the excellent performance during this assessment period. Improvements were noted in almost all areas evaluated.

<u>Functional Area</u>	<u>July 1, 1982 - June 30, 1983</u>	<u>July 1, 1983 October 31, 1984</u>	<u>Trend During Latest SALP Period</u>
Plant Operations	1	1	Improving
Radiological Controls	1	1	Constant
Maintenance	1	1	Improving
Surveillance	1	1	Improving
Fire Protection	2	2	Improving
Emergency Preparedness	1	1	Improving
Security and Safeguards	2	1	Improving
Refueling	1	1	Not determined
Quality Programs and Administrative Controls			
Affecting Quality	2	2	Improving
Licensing Activities	2	1	Improving

IV. PERFORMANCE ANALYSIS

A. Plant Operations

1. Analysis

During the evaluation period, inspections were performed by the resident and regional inspection staffs. Plant management continued to be strongly involved with the assurance of quality operation. Plant performance was excellent. This was accomplished through the combined efforts of management, operators, and maintenance and support sections. Plant operations were with few exceptions outstanding. Control room operators routinely followed current procedures. Occasional instances of failure to follow procedures were observed as shown by the violations below.

Management responsiveness to NRC and other initiatives was expeditious and thorough. During this evaluation period, a program was established and implemented in response to the TMI item on operator experience feedback. The program was established at the corporate level and affected the technical, maintenance, training, health physics and operations staff. A considerable lag in response to tracking new initiatives at the inception of the program was initially noted. The initiatives were routed promptly to the proper personnel for action and the tracking and feedback system improved to a suitable level to assure that adequate actions were being taken.

Licensee management continued to focus attention on preventive measures by preplanning maintenance during scheduled outages. This materially contributed to successful sustained operation of both units. Management sensitivity to expeditious and thorough resolution of technical problems was illustrated by the following examples:

- A total team management concept was instituted to effect successful removal of the Unit 1 thermal shield and repair the core support barrel.
- The management team approach was effectively used to address the shutdown of both units by a jellyfish impingement in early September 1984. Extensive repairs were required to repair damaged intake screens. Innovative ideas were instituted in an attempt to prevent recurrence of damage to the intake structures.
- The management team concept was used in preparation for the refueling of Unit 2, which commenced at the end of this SALP evaluation period. This was effective in reducing the length of the refueling outage.

Management support of the licensee event report (LER) reporting process, however, should be increased. Many of the LER submissions made by the licensee were made with inadequate coded information, incomplete descriptive detail sections and safety analyses which were not comprehensive.

Operating staff training and knowledge of the facility was found to be excellent. Operator licensing examinations were conducted during the evaluation period, including both written and oral examinations. Twenty-one reactor operator and eight senior reactor operator examinations were given; fourteen reactor operator and six senior reactor operator candidates passed their examinations and received licenses. In addition, dual licensing oral examinations were administered to operators currently licensed on a single unit. All of the reactor operators and six of the senior reactor operators who were examined passed their examinations and received licenses.

General employee training as well as Shift Technical Advisor training was adequate. Licensed operator requalification training was adequate; however, one minor procedural inadequacy was identified relating to reactivity manipulation performance. This procedural inadequacy led to some confusion, but reactivity manipulations were verified as being performed at required times.

Four violations were identified during the evaluation period:

- a. Severity Level V violation citing three examples of failure to properly execute in-plant clearance orders.
- b. Severity Level V violation for failure to have a lock on a valve that was required by procedure to be locked open.
- c. Severity Level V violation for failure to properly control official copies of several procedures in the control room.
- d. Severity Level V violation for failure to properly install and control a containment high range radiation monitor.

2. Conclusion

Category: 1

Trend During This Period: Improving

3. Board Recommendations:

Licensee management attention was aggressive in this area. The Board recommends that NRC staff resources applied to the routine inspection program be reduced.

B. Radiological Controls

1. Analysis

During the evaluation period, inspections of radiological controls were performed by the resident and regional inspection staffs. The licensee was observed conducting various operational and maintenance activities during normal operation, refueling, and packaging and shipment of radioactive materials. Also included was a confirmatory measurements inspection using the Region II mobile laboratory.

The licensee's health physics staffing level, both at the corporate office and plant site, was fully adequate and compared favorably with other utilities. There continued to be adequate numbers of ANSI-qualified contract and plant health physics technicians available for proper control of health physics activities. The radiation protection program was well managed, technically competent, and fully supported by plant management. This was best demonstrated during the major outage for removal of the Unit 1 thermal shield from the reactor vessel, which presented substantial potential for high exposures as well as other radiological control problems. This project was handled very professionally and the ALARA program established and implemented by the licensee was effective. The total man-rem for CY-1983 was 1141; for CY-1984 (through September) the total was 974 man-rem.

The licensee also demonstrated good performance in handling, packaging and shipping the substantial quantities of radioactive waste resulting from the thermal shield removal.

Although serious in-leakage of sea water into the secondary plant had occurred during the initial two fuel cycles of Unit 1, the licensee has taken significant steps to correct the design problems by retubing the condenser with titanium tubes and installing a condensate polisher. The licensee has developed a water chemistry program consistent with the Steam Generator Owners Group (SGOG) guidelines and has a chemistry staff that did a good job translating the concerns in those guidelines into plant surveillance and control actions. The only weakness appeared to be inadequate training of operations personnel in the operation of the Condensate Polishing System.

Results of split sample analyses between the licensee and NRC laboratories generally were in agreement. NRC identified the need for the review and update of established procedures, review of the inter-laboratory cross check program and validation studies of Fe-55 analyses. Licensee responses to previous violations and inspector followup items were timely and adequate. All other aspects of the radiological measurements and environmental programs were adequate.

One violation was identified during the evaluation period.

Severity Level IV violation for failure to follow radiation work permit protective clothing requirements.

2. Conclusion

Category: 1

Trend During This Period: Constant

3. Board Recommendations:

Licensee resources in this area were ample. The Board recommends that NRC staff resources applied to the routine inspection program be reduced.

C. Maintenance

1. Analysis

During the evaluation period inspections were performed by the resident and regional inspection staffs. Licensee management continued to seek improvements in the maintenance program, and emphasized adherence to procedural and regulatory requirements. This resulted in a decrease in the number and severity level of violations. Maintenance staffing and training appeared to be adequate. Management involvement and resolution of technical issues was especially evident in completing the repairs to the Unit 1 core support barrel and removal of the thermal shield. Management involvement was also apparent in addressing a jellyfish impingement which had the potential to cause long term damage to the site. The problem was addressed by completing the necessary repairs to the intake structures. The excellent plant performance record for Unit 2 first cycle operation was another indication of the quality of maintenance activities.

Management sensitivity to expeditious and thorough resolution of technical problems was illustrated by including maintenance activities into the total team management concept. This concept is described in the Operations section of the SALP. The maintenance activities which were conducted under the auspices of the team management approach were the thermal shield repair, Unit 2 refueling and intake structure repair.

Management responsiveness to NRC initiatives was considerably improved over the previous SALP evaluation period through the establishment of the operating experience feedback program. This program affected all levels of the corporate staff, assigned an

individual tracking number to each incoming issue (e.g., IE Bulletin, Information Notice, INPO item, etc.) and tracked it to assure proper resolution.

Two violations were identified during the evaluation period:

- a. Severity Level IV violation for failure to control activities during removal of flammable fire barrier.
- b. Severity Level V violation for failure to properly complete paper work on two plant work orders as required by maintenance procedure.

2. Conclusion

Category: 1

Trend During This Period: Improving

3. Board Recommendations

Licensee management in this area was oriented towards nuclear safety. The Board recommends that NRC staff resources applied to the routine inspection program be reduced.

D. Surveillance

1. Analysis

During the evaluation period, inspections were performed by the resident and regional inspection staffs.

Management involvement in staffing and training for operational surveillances continued to be adequate. Quality Control (QC) personnel and nuclear plant supervisors continued to be intimately involved in assuring that surveillances were completed as scheduled and that the surveillance procedures used were current. No instances of use of an out-of-date surveillance procedures were identified by NRC during the evaluation period.

Surveillance scheduling and implementing procedures were effective, as evidenced by only one missed surveillance. The lone missed surveillance was licensee identified and reported in an LER.

Licensee personnel understood technical issues and the resolution of technical issues was timely and viable. Licensee responses to NRC initiatives were timely, and there were few long-standing regulatory issues attributable to the licensee.

Licensee management involvement in Inservice Inspection (ISI) and Inservice Testing (IST) activities was adequate. Phase I of the ISI manual, involving corporate and site management, was issued. The issue of this manual greatly improved the licensee's written policies and control of ISI. Decision making was usually at a level that assured adequate management review. Corporate management was adequately involved in site activities. Reviews were generally timely, thorough and technically sound. Records were generally complete, well maintained, and available.

Understanding of ISI and IST technical issues was apparent. Resolution of these technical issues was generally timely and viable, with sound approaches being used. Licensee responses to NRC ISI and IST initiatives were timely and there were few long-standing ISI and IST regulatory issues attributable to the licensee.

No violations were identified during the evaluation period:

2. Conclusion

Category: 1

Trend During This Period: Improving

3. Board Recommendations

A high level of performance with respect to operational safety was achieved. The Board recommends that the NRC staff resources applied to the routine inspection program be reduced.

E. Fire Protection

1. Analysis

During this assessment period, inspections were performed by the resident and regional inspection staffs. A review of the fire protection administrative control procedures indicated that these procedures complied with the NRC guidelines.

The fire brigade organization and training was found to be satisfactory. Reviews of shift crew composition indicated that adequate personnel were assigned to the shifts to meet the minimum shift crew composition of the Technical Specifications. Plant fire protection systems were found to be in service and, of the surveillance tests records reviewed, it appeared that the systems were being adequately maintained. The general housekeeping of the plant was acceptable.

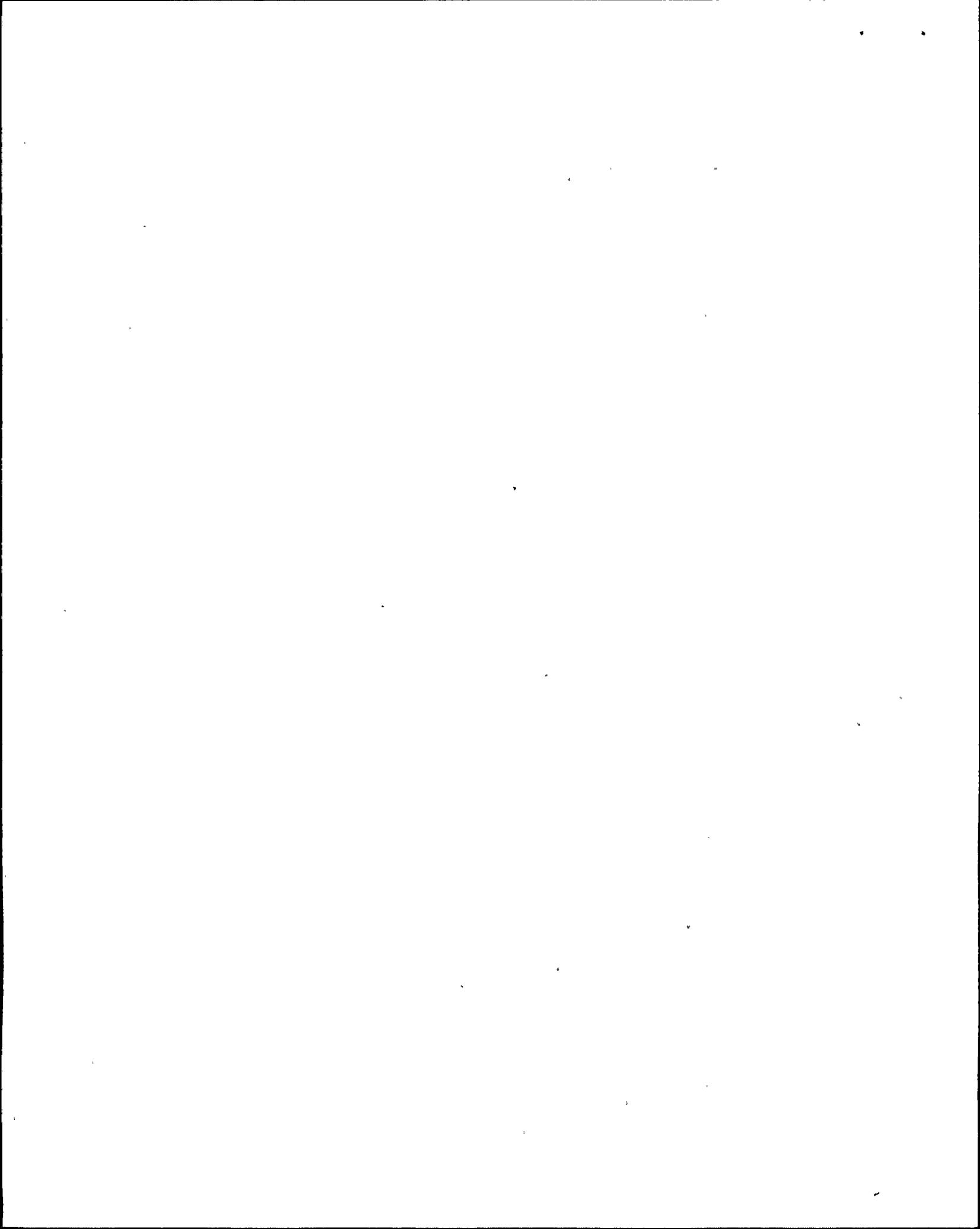
The licensee fire brigades were observed responding to fire drills and on one occasion, to a real fire in a decontamination trailer. The brigades responded professionally and were effective in implementing procedures to assess and to control the fire. The licensee's fire protection activities appeared to be well controlled and supervised, including brigade training and drills.

In general, most of the fire protection commitments reviewed were found to be satisfactory. However for the recently completed Unit 2, a number of discrepancies were identified with the fire detection system, automatic sprinkler system, interior fire hose system, emergency lighting units, and fire doors. Also, a number of features did not meet Final Safety Analysis Report (FSAR) or other commitments to NRC. These items included the incomplete installation of the cable tray fire barriers, cables not coated with a fire retardant material, control room ceilings not being replaced with an open grid ceiling to permit early response of the smoke detection system installed above the ceiling, and the reactor coolant pump oil collection system not being sized to catch and retain all of the oil in the event of a rupture of all pump lubrication systems.

The fire fighting strategies for Unit 2 were reviewed and found to be inadequate as indicated in violation b, below, in that strategies were not provided for all areas of the plant containing safety related components and the strategies provided were not based on the most up-to-date fire protection construction drawings, documents, and commitments to NRC. This inadequacy has been corrected. Overall, the management involvement and control of the fire protection program elements was adequate. Major problem areas were promptly corrected. The responsiveness to NRC initiatives was timely, with no major violations. An inadequate number of fire protection events occurred to evaluate the licensee's action in reporting fire protection events.

The following Unit 2 violations and deviations were identified during the evaluation period:

- a. Severity Level IV violation for failure to fully implement the fire protection program (use of four-hour vice eight-hour battery-powered emergency lights).
- b. Severity Level V violation for failure to provide fire fighting strategies for all areas of the plant containing safety related components.
- c. Deviation for failure to provide automatic sprinkler system installations which meet the applicable provisions of National Fire Protection Association Standard 13.



- d. Deviation for failure to install a sufficient number of smoke detectors within a number of areas containing safety related components.
- e. Deviation for failure to install the fire detection devices in the correct location in two plant areas and inadequate number of detectors within another area.
- f. Deviation for failure to provide a fire door in the wall opening separating the drumming storage area from the remainder of the auxiliary building.
- g. Deviation for failure of the interior fire hose systems for the containment and fuel pool areas to provide a water system of adequate volume and pressure to supply a standard 1½-inch fire hose.

2. Conclusion

Category: 2

Trend During This Period: Improving

3. Board Recommendations

Performance in this area demonstrated a proper concern for nuclear safety. No decrease in licensee attention is recommended. Additionally, the Board does not recommend a change in inspection resources applied to the routine program in this area.

F. Emergency Preparedness

1. Analysis

During the evaluation period, inspections were performed by the resident and regional inspection staffs including observation of a full-scale exercise. A special inspection was conducted which focused on the ability of the plant supervisors to make prompt protective-action decisions.

The first full-scale Federal Field Exercise was held in conjunction with the licensee's annual exercise. The Federal exercise lasted three days and involved licensee participation and planning beyond that normally required. This scale of exercise participation was not required of the licensee, who voluntarily accepted the considerable extra burden. Throughout the ten month period of planning and developing the exercise, the licensee provided considerable effort and resources, frequently volunteering additional support such as hosting meetings at the Emergency

Operating Facility (EOF) and assisting with additional communications. The licensee assisted NRC and contract personnel by providing service access for NRC communication equipment located in the Technical Support Center and EOF areas. The licensee's performance was noteworthy and reflected the corporate office's and plant management's commitment to the emergency preparedness program. Following the exercise, the licensee has shown special initiative by participating in seminars, workshops, and meetings to share the exercise experience with the nuclear industry.

Routine inspections and exercise observations disclosed that the emergency organizations and staff were acceptable. Corporate management demonstrated a commitment to maintaining an effective emergency response program, and was directly involved in the annual exercise and follow-up critique.

Personnel assigned to the emergency response organization were adequately trained in required areas of emergency response. Training records of shift supervisors documented that required familiarization training was conducted in accordance with the emergency plans and implementing procedures. Individuals were cognizant of their responsibilities and authorities, and understood their assigned functions during both routine operations and simulated emergency situations.

Full time personnel were assigned at the plant and corporate office for administration of the emergency preparedness program. Contractor support was provided as necessary to augment the program. An adequate working relationship existed between the licensee and off-site support agencies.

No violations were identified during the assessment period.

2. Conclusion

Category: 1

Trend During This Period: Improving

3. Board Recommendations

Licensee management involvement in this area was aggressive. The Board recommends that NRC staff resources applied to the routine inspection program be reduced.

G. Security and Safeguards

1. Analysis

During this evaluation period, inspections were performed by the resident and regional inspection staffs. The installation of new, high technology security equipment at the site resulted in several unexpected hardware and software problems. Licensee security management conducted prompt and thorough analyses to identify the source of the problems and implement system modifications and replacement where needed. The licensee's analysis of the technical issues demonstrated sound judgment. Two special inspections were conducted concerning failure of portions of this new security equipment.

The licensee was highly responsive to NRC concerns in the areas of vital equipment protection, intrusion detection system operation and security compensatory measures. The licensee exhibited a keen interest in establishing and maintaining an effective security program.

The security organization and contract security force were adequately staffed with trained and qualified personnel. However, increased licensee management involvement in the oversight of contractor security force operations was needed to assure that the licensee had adequate and timely information concerning plant security status and events.

Security events were reported in a timely manner, were accurately analyzed, and were addressed by prompt and appropriate corrective actions.

Routine daily physical security activities were observed while at the access control points, during badge training classes, and during periods of special security procedure implementation, such as was required when doors or the security computer were inoperable. The security staff appeared to be especially alert to the need for the monitoring of special activities, such as special control measures during the jellyfish impingement on the cooling canal intake.

One violation was identified during the evaluation period:

Security Level IV violation for inadequate control of a licensee designated vehicle.

2. Conclusion

Category: 1

Trend During This Period: Improving

3. Board Recommendations:

Licensee management in this area was oriented toward nuclear safety. To ensure that a high level of performance continues the Board recommends no change to the inspection resources applied to the routine program in this area.

H. Refueling

1. Analysis

During this evaluation period, routine inspections were performed by the resident inspector during preparations for refueling, receipt of new fuel for both units, Unit 1 refueling activities and the installation of the Unit 2 spent fuel racks. All of the activities were well managed.

Management involvement in and control of refueling activities was thorough and effective. Excellent housekeeping had an impact on licensee effectiveness during refueling. The establishment of a total-team management concept resulted in a record 38 day outage for refueling of Unit 2.

Staffing, throughout refueling, met or exceeded the Technical Specification (TS) requirements without the use of excessive overtime for the operations staff. Training appeared to be satisfactory and certainly was a strong contributing factor to the short refueling outage time.

One violation was identified during the evaluation period:

Severity Level V violation for failure to obtain an official change to an approved procedure, and for several technical errors found in existing approved procedures.

2. Conclusion:

Category: 1

Trend During This Period: Not Determined

3. Board Recommendations

Licensee resources appeared to be ample in this area. There was not sufficient activity in this area to determine a trend. The Board recommends no change to the inspection resources applied to the routine program in this area.

I. Quality Programs and Administrative Controls Affecting Quality

1. Analysis

During this evaluation period, inspections were performed by the resident and regional inspection staffs. Inspections at the site and at corporate offices indicated that licensee procurement, receipt, storage and handling activities were well documented and controlled. Personnel interviewed were knowledgeable and followed existing administrative controls for these activities. These activity records were complete and easily retrievable. Procurement staffing, warehousing activities, and vendor controls were adequate.

Design control activities such as review by plant personnel, including various safety committees, appeared adequate. Drawing control for Unit 2 was performed by the contractor design organization. Drawings were marked to indicate outstanding design changes; however, few drawings had been permanently updated to reflect as-built conditions.

A problem was identified with satellite record storage. One-hour fire cabinets were being used; however, the evaluation for such storage had not been performed. These satellite locations were not identified by administrative controls. Management attention is needed in this area. The licensee has taken corrective action which will be reviewed at a future date.

Various craft training records were kept by department training coordinators. Record storage for training was determined to be inadequate to meet existing regulatory requirements.

Licensee QA audit of calibration activities concluded that administrative controls were adequate. Inspection in this area identified that calibration activities did not meet all existing requirements which indicated that the QA audit was not an effective management tool. Violation c was issued to rectify calibration control inadequacies. Another violation was issued for an inadequate audit. Continued management attention is needed in auditing activities to assure that audits continue to be performed to the depth necessary to form meaningful conclusions.

The licensee QC staff was actively involved in monitoring all aspects of plant operation, maintenance, and surveillance activities. The plant QC organization also had responsibility for collection and storage of all QA records. Inspections did not identify any deficiencies in these functions.

During this period, licensee corporate management initiated a Quality Improvement Program (QIP). This program was an additional means of improving quality and cost effectiveness, by encouraging QA initiatives at all levels of management and by including personnel at the working levels as a part of the evaluation team that recommended solutions to problems.

Three violations were identified during the evaluation period:

- a. Severity Level IV violation for failure to perform an audit to the depth necessary to verify surveillance requirements.
- b. Severity Level IV violation for failure to control and calibrate certain safety-related gages.
- c. Severity Level V violation for failure to identify satellite record storage locations and perform required fire loading analysis.

2. Conclusion

Category: 2

Trend During This Period: Improving

3. Board Comments

Licensee resources applied to this area were reasonably effective. The Board recommends no change in the inspection resources applied to the routine program in this area.

J. Licensing Activities

1. Analysis

During the rating period the licensee's management demonstrated active participation in licensing activities and kept abreast of all current and anticipated licensing actions. Particularly noteworthy was the management involvement in five specific areas. The major effort associated with the removal of the thermal shield from Unit 1 and the subsequent repair of the damaged core support barrel required constant and intensive management attention. The successful completion of this effort was largely the result of the high management interest and involvement. During the report period, the licensee successfully completed the documentation to close-out the equipment qualification issue on Unit 1. This was largely due to management assigning the necessary effort to complete the task. The same applies to the successful resolution of the Appendix R exemption requests for Unit 1. In supporting

the spent fuel pool rerack licensing action, licensee management placed a great deal of emphasis on obtaining and transmitting information to the NRC staff reviewers. Without this management involvement, the rerack amendment could not have been completed and issued in time to meet the needs of Unit 2. The cycle 2 reload for Unit 2 was an extensive document that required the attention of the licensee's management to ensure that the necessary follow-up information was submitted to the NRC in a timely manner. The amendment was not issued prior to the close of the report period, but was prepared and in concurrence throughout the period. In all licensing actions processed during the report period, licensee management expressed a continued interest in the status of NRC reviews. The licensee's management consistently exercised good control over its internal activities and of its contractor, especially in regard to the thermal shield problem on Unit 1 and the refueling outage on Unit 2. They also maintained effective communication with the NRC staff.

Areas where management attention needed to be increased were responses to requests for additional information, preparation of significant hazards considerations in amendment requests, and reducing the amount of time that it takes to get correspondence processed. With regard to responses to the NRC's information requests, the licensee tended to be slow in documenting information that was used by the staff as a basis for writing safety evaluations. This was particularly true for those items that did not have a direct bearing on the major actions underway. During this reporting period those major actions involved were the recovery program on Unit 1, the planning and initiating of the refueling outage for Unit 2 and the spent fuel pool rerack for Unit 2. As a result of activities in these areas, responses to other licensing actions were delayed. Control of heavy loads was an example of this problem. In the preparation of the no significant hazards consideration in support of amendment applications, there was a notable improvement over the course of the reporting period.

The licensee's management and its staff have demonstrated sound technical understanding of issues involving licensing actions. Their approach to resolution of technical issues has demonstrated extensive technical expertise in all technical areas involving licensing actions. The decisions related to licensing issues have routinely exhibited conservatism in relation to significant safety matters. The licensee's frequent visits to NRC and sound communications during the rating period assured sound technical discussions of decisions regarding resolution of safety issues. This was particularly true for issues related to the thermal shield/core support barrel problem and Unit 2 reload and rerack.

During the reporting period, the licensee effectively resolved complex technical issues concerning core support barrel repair, Containment Purge and Vent issues, responses to NUREG-0737, Supplement 1 items, and spent fuel pool rerack.

On occasions, when the licensee deviated from the staff guidance, the licensee consistently provided good technical justification for such deviations. The fire protection program and the program for environmental qualification of equipment were good examples illustrating the soundness of the technical justifications for deviations from the guidance. When unusual events occurred at the St. Lucie plant, the licensee used conservative approaches in dealing with the situations, and performed in-depth analyses of significant safety issues raised by such events. The licensee made frequent visits to NRC to discuss the forthcoming requests for staff actions prior to formal submittals, as well as to present the status of the work associated with the thermal shield/core support barrel recovery program. This approach has consistently been found to be beneficial to both the staff's and licensee's efficiency in processing actions.

The licensee has been responsive to NRC initiatives. These responses have generally been made in a timely manner or the licensee has provided justification for a delay and provided a new target date for the response. During the rating period, the licensee has made every effort to meet or exceed the established commitments. This is best illustrated by their responses to TMI action items and compliance with the rules related to fire protection and environmental qualification.

4. Conclusion

Category: 1

Trend During This Period: Improving

5. Board Recommendations

A high level of performance in this area was achieved.

V. SUPPORTING DATA AND SUMMARIES

A. Licensee Activities

During the assessment period Unit 1 was in an extended outage which commenced in February 1983 and ended with criticality on May 16, 1984. The unit had been defueled for repairs, including removal of the thermal shield. The unit returned to routine commercial operation for the remainder of the reporting period.

Unit 2 activities included completion of power ascension testing. The unit commenced commercial operation on August 8, 1983, and operated at power for most of the reporting period. The unit performed exceptionally well during its first fuel cycle, maintaining a capacity factor of above 92%. It was shut down on October 13, 1984, to begin its first refueling. The licensee implemented improved refueling outage control procedures that were expected to reduce the duration of this outage. The outage was on schedule at the conclusion of the evaluation period and was subsequently completed in 38 days, the shortest ever achieved at St. Lucie.

During the evaluation period, the licensee completed modifications to the Unit 2 spent fuel racks to provide additional storage.

One new challenge to plant operation occurred when intake screens became clogged with jellyfish, causing considerable damage to the intake system and causing shutdown of both units for nearly two weeks.

B. Inspection Activities

During the assessment period, routine inspections were performed at the St. Lucie facility, and several special inspections were also conducted. Of these, one inspection included observation of and participation in a full scale emergency exercise in March, 1983. This was a federal field exercise that included the Federal Emergency Management Agency (FEMA), Department of Defense (DOD) and Florida State and local agencies. Another was a special training assessment by a Region II team in September 1984. A third special inspection conducted by Region II in September, 1984 was an assessment of the facility water chemistry programs.

C. Licensing Activities

1. Analysis

The basis for this appraisal was the licensee's performance in support of licensing actions that were either completed or had a significant level of activity during the current rating period. These actions, consisting of amendment requests, exemption requests, responses to generic letters, TMI items, and other actions, are classified as follows:

- 36 Multi-Plant Actions (5 completed). Included in this category are:

St. Lucie 1

- o Fire Protection SER Supplement, Completed

- NUREG-0737 Tech Spec (Generic Letters 82-16 or 83-02), Completed
- Thermal Shield Damage, Completed
- Reactor Vessel Overpressure Protection, Completed
- Appendix I Tech Spec Implementation Review, Completed
- Equipment Qualification of Safety Related Electrical Equipment
- Exemptions from Appendix R
- Control of Heavy Loads

St. Lucie 2

- Control of Heavy Loads
- 70 Plant-Specific Actions (27 Completed). Included in this category are:

St. Lucie 1

- License Amendment, D.C. Distribution, Completed
- Fire Protection Technical Specification Changes, Completed
- Transfer to EXXON Fuel, Completed
- Cycle 6 Reload, Completed
- Amendment to Linear Heat Rate Change, Completed
- License Amendment for Relief from Technical Specification Requirement, Completed
- Amendment to Modify Peaking Factors and Penalties, Completed
- Amendment to Delete Containment Leakage Path Test, Completed
- Amendment dealing with Minimum Shift Crew Composition, Completed
- Alternate Shutdown, Completed
- Reactor Coolant System Vents Technical Specification, Completed
- Exemption from Appendix R
- Containment Purge Valve Operability

St. Lucie 2

- Flame Impingement Shields Inside Containment, Completed
- Steam Generator Pressure/Temperature Limitation, Completed
- Barrier for High Energy Equipment, Completed
- Turbine Overspeed Protection, Completed
- Amendment dealing with Minimum Shift Crew Composition, Completed
- Amendment on Axial Shape Index Figures, Completed
- Amendment on Mechanical Snubber, ISI Requirements, Completed
- Pressurizer Heater Transformer Design, Completed
- Turbine Disc Integrity, Completed
- Continuous Purge System
- Fire Protection Compliance with Appendix R
- Spent Fuel Pool Rerack
- Cycle 2 Reload

- 26 TMI (NUREG-0737) Actions (13 Completed). Included in this category are:

St. Lucie 1

- o Inadequate Core Cooling Guidelines, Completed
- o Auto Power Operated Relief Valve (PORV) Isolation, Completed
- o Report on PORV Failures, Completed
- o Thermal Mechanical Report, Completed
- o Potential for Voiding in RCS, Completed
- o RCS High Point Vents, Completed
- o Post Accident Sampling Modifications, Completed
- o Emergency Core Cooling System Outages, Completed
- o Containment Pressure Instrument, Completed
- o Containment Water Level Monitor, Completed
- o Containment Hydrogen Monitor, Completed
- o Inadequate Core Cooling Instrumentation
- o Technical Support Center
- o Operation Support Center
- o Emergency Operations Facility
- o Detailed Control Room Design Review
- o Safety Parameter Display System

St. Lucie 2

- o Detailed Control Room Design Review Program Plan, Completed
- o Thermal Mechanical Report, Completed
- o Emergency Facilities (See St. Lucie 1 above)
- o Safety Parameter Display System
- o Inadequate Core Cooling Instrumentation

D. Investigations and Allegations Review

No major investigation or allegation activities occurred during this review period.

E. Escalated Enforcement Actions

1. Civil Penalties

No civil penalties were proposed during this assessment period.

2. Orders (only those relating to enforcement)

No orders relating to enforcement matters were issued.

F. Management Conferences Held During Appraisal Period

1. Conferences

No conferences relating to regulatory performance or enforcement were held.

2. Confirmation of Action Letters

No confirmation of Action Letters were issued.

G. Review of Licensee Event Reports and 10 CFR 21 Reports Submitted by the Licensee.

During the assessment period, there were 7 LERs reported for Unit 1 and 49 LERs reported for Unit 2. The distribution of these events by cause, as determined by the NRC staff, was as follows:

<u>Cause</u>	<u>#LERs</u>	
	<u>Unit 1</u>	<u>Unit 2</u>
Component Failure	1	25
Design	3	1
Construction, Fabrication, or Installation	0	4
Personnel		
- Operating Activity	1	3
- Maintenance Activity	0	6
- Test/Calibration Activity	0	2
- Other	1	0
Out of Calibration	1	0
Other	0	8
TOTAL	7	49

It was noted that for Unit 2, 73% of the LERs fell into just 2 categories: Component Failure (51%), and Personnel Error (22%).

H. Inspection Activity and Enforcement

FUNCTIONAL AREA	NO. OF VIOLATIONS IN EACH SEVERITY LEVEL				
	V	IV	III	II	I
Plant Operations	4				
Radiological Controls		1			
Maintenance	1	1			
Surveillance					
Fire Protection	1	1			
Emergency Preparedness					
Security and Safeguards		1			
Refueling	1				
Quality Program and Administrative Controls Affecting Quality	2	1			
TOTAL	9	5			

