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ENCLOSURE

SALP BOARD REPORT

U. S. NUCLEAR REGULATORY COMMISSION

REGION II

SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

INSPECTION REPORT NUMBER
50-302/85-03

FLORIDA POWER CORPORATION

CRYSTAL RIVER UNIT 3

July 1, 1983 through October 31, 1984

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.

A NRC SALP Board, composed of the staff members listed below, met on January 22, 1985, to review the collection of performance observations and data to assess the licensee 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 Crystal River Unit 3 for the period July 1, 1983, through October 31, 1984.

SALP Board for Crystal River Unit 3:

J. P. Stohr, Director, Division of Radiation Safety and Safeguards (DRSS), Region II (RII) (Chairman)
P. R. Bemis, Director, Division of Reactor Safety (DRS), RII
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D. L. Zeiman, Chief, Procedures and Systems Review Branch, Division of Human Factors, Office of Nuclear Reactor Regulation (NRR)
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Attendees at SALP Board Meeting:

V. W. Panciera, Chief, Projects Section 2B, DRP, RII
H. Silver, Project Manager, Operating Reactors Branch 4, Division of Licensing, NRR
T. Stetka, Senior Resident Inspector, Crystal River, DRP, RII
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C. M. Upright, Chief, Quality Assurance Program Section, DRS, RII
D. R. McGuire, Chief, Physical Security Section, DRSS, RII
W. E. Cline, Chief, Emergency Preparedness Section, DRSS, RII
F. Jape, Chief, Test Program Section, DRS, RII
D. M. Montgomery, Chief, Independent Measurements and Environmental Protection Section, DRSS, RII
J. J. Blake, Chief, Materials and Processes Section, DRS, RII

II. CRITERIA

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

Category 1: Reduced NRC attention may be appropriate. Licensee management attention and involvement are aggressive and orientated 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; rather the categorization process involves a review of performance during the current SALP period and categorization of the trend of performance during that period only. 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

The Crystal River Facility was effectively managed and has achieved a satisfactory level of operational safety. Strength was noted in the maintenance area. Weaknesses were noted in the areas of surveillance and security. Management involvement has resulted in improved plant availability. The plant operations area has shown improvement due to increased procedure adherence, increased operating knowledge by the staff, and reduced operating shift turnover. The surveillance area, however, has shown continuing performance degradation primarily due to the licensee's failure to take adequate corrective action to prevent the recurrence of previously identified problems. There has been some decrease in performance in the radiological control area primarily due to weaknesses in chemistry technician training. The maintenance area has shown improvement; however, the problem with adequate control over management of contract personnel is still apparent. It should be noted that serious problems associated with Licensed Operator Training Program documentation were identified subsequent to the end of the assessment period. These deficiencies will be discussed in the next SALP Report.

Functional Area	July 1, 1982 - June 30, 1983	July 1, 1983 - October 31, 1984	Trend During Latest SALP Period
Plant Operations	2	2	Improving
Radiological Controls	1	2	Constant
Maintenance	2	1	Improving
Surveillance	2	3	Declining

Functional Area	July 1, 1982 - June 30, 1983	July 1, 1983 - October 31, 1984	Trend During Latest SALP Period
Fire Protection	2	Not Rated	Not Determined
Emergency Preparedness	2	2	Constant
Security	2	3	Declining
Refueling	1	Not Rated	Not Determined
Quality Programs and Administrative Controls Affecting Quality	2	2	Declining
Licensing Activities	2	2	Improving

IV. PERFORMANCE ANALYSIS

A. Plant Operations

1. Analysis

During this evaluation period, inspections of plant operations were performed by the resident and regional inspection staffs.

Management involvement and control to assure quality of operations has been satisfactory and was evident in the approach to resolution of technical issues and responsiveness to the NRC. Major operational decisions were made at a management level adequate to assure appropriate supervisory involvement. The organizational restructuring that took place during the last assessment period has resulted in improvement in this area. The plant had a very successful operating cycle during this assessment period as evidenced by increased operating time and a minimum of enforcement issues. This demonstrated increased experience and familiarity with plant operation by the operations staff.

Two instances of inadequate control of plant operations were observed. One instance that occurred in August 1983 resulted in a reactor trip due to operator error during a plant startup. The other instance occurred in August 1984 when the containment internal pressure was allowed to approach the technical specification limit of 17.7 psia because timely action was not taken to maximize containment cooling. This event resulted in a considerable expenditure of time for both the licensee and NRC staffs and required the use of a system which was neither designed to nor met the requirements for containment purging. Specific NRC approval was given to use this system to correct the pressure concern.

Six reactor trips from power operation occurred during the assessment period. Five of these trips were caused by equipment failures and one by operator error. The plant had several scheduled short-term maintenance shutdowns. These shutdowns were well planned as evidenced by the excellent performance exhibited in meeting schedule commitments. A modified startup from the refueling outage at the beginning of the assessment period had to be conducted with only three of the four reactor coolant pumps available due to pump seal degradation. This startup and post-refueling testing was witnessed by the NRC staff and was found to be done well.

Operations staffing and training were adequate. Because there has been little licensed operator turnover, there has been good continuity in understanding and implementing plant procedures and practices. The addition of a sixth operating shift has improved morale and allowed the staff additional time to improve plant operating procedures and practices without the use of excessive overtime. There was, however, a moderate turnover of non-licensed operators which might affect the input into the licensed operator program and could result in a future shortage of licensed operators. In addition, findings by an NRC training assessment team subsequent to the end of the assessment period uncovered problems associated with Licensed Operator Training Program documentation. Such problems could also affect the availability of onshift licensed operators.

Three operator licensing examination visits were conducted during the evaluation period. Written and operating examinations were administered. Five reactor operator, eight senior reactor operator, and five senior reactor operator/instructor certification examinations were administered. All of the operator and senior reactor operator candidates passed their examinations and received licenses. Four instructor candidates passed and received certificates. This performance demonstrates a very good passing rate with regard to initial licensed operator training.

The information provided in the narrative sections of the Licensee Event Reports (LERs) was sufficient to provide a good understanding of the event. There were no significant problems with the coded information provided by the licensee. The descriptions of the events were adequate. The apparent cause of the occurrences was explained and well documented. When the licensee promised to issue an updated report, it was submitted. Additionally, in most cases the licensee referenced the LERs pertaining to previous events of similar nature. Multiple events were combined correctly in a single LER in accordance with NRC guidelines.

Two of the violations identified below involved procedural adequacy and approval. The procedural adequacy violation indicated a problem in the procedure review and approval process. While some improvements have been made in this area, procedure processing problems continue to exist. The procedure approval violation indicates a reluctance on the part of operations personnel to use a temporary approval process, rather than the more time consuming permanent approval procedure. This appears to have been resolved as evidenced by the expanded use of the temporary procedure change method when timely changes were needed, and by the reduction of the procedure change backlog. However, additional management attention to the procedure review and approval process is necessary in order to reduce the time needed to implement a change.

Three violations were identified and are not indicative of a programmatic breakdown:

a. Severity Level IV violation for failure to perform independent verification of electrical switch and breaker alignments.

b. Severity Level IV violation for an inadequate operations procedure that resulted in violating a Technical Specification limiting condition for operation.

c. Severity Level V violation for performing plant operations using unapproved procedures.

2. Conclusions

Category: 2

Trend: Improving

3. Board Recommendations

The licensee's use of resources in this areas was reasonably effective. The Board believes, however, that the moderate turnover rate of non-licensed operators could create future problems in the supply of experienced licensed operator candidates. Additionally, a recent training assessment has uncovered apparent problems of a programmatic nature in the operator licensing training program. These apparent problems will be addressed in the next SALP assessment. No change in the level of NRC staff resources applied to the routine inspection program is recommended.

B. Radiological Controls

1. Analysis

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

The radiation protection program continues to exhibit improvement with the upgrading of procedures, increased management attention, and improved training programs for Health Physics Technicians. Management involvement was evident in the approach to resolution of technical issues and responsiveness to the NRC.

The licensee's health physics staffing level was adequate and compared well to other utilities having a facility of similar size. An adequate number of ANSI qualified licensee and contract health physics technicians were available to support routine and outage operations. The performance of the health physics staff in support of routine operations and outages was adequate.

The ALARA management program continued to be very well managed. The facility's man-rem total for the evaluation period was 108.6 man-rem. This value is well below average for a single unit pressurized water reactor.

During the evaluation period, the licensee disposed of 23,944 cubic feet of solid radioactive waste. The radioactive material shipping area was generally well managed, although it accounted for one violation listed below. The liquid and gaseous effluent release program was well managed, with evidence that all releases were adequately and effectively monitored.

Confirmatory Measurements and Environmental Inspections were conducted during the evaluation period. Results of split sample analyses conducted between licensee and the Region II Mobile Laboratory Ge(Li) detectors were satisfactory. The confirmatory measurements inspection identified a need for the licensee to evaluate two items: effect of high dead-time on Ge(Li) detector accuracy and evaluation of systematically high measurements of gaseous radioactivity. The inspection also determined that licensee identified problems in the radio-chemistry and chemistry cross check programs were not resolved in a timely manner. As a result of previously identified items, the licensee upgraded their site meteorological program. The ensuing changes were undergoing evaluation at the close of this SALP evaluation period. All other aspects of the radiological measurements and environmental programs were adequate.

An area of weakness concerning chemistry personnel and procedures was identified. The weakness involved the failure to follow chemistry procedures which, in this instance, indicated a lack of adequate personnel training. Although some improvements were made, subsequent observations by the NRC of chemistry department activities indicated continuing problems with procedure adherence and adequacy. In addition, it appeared that chemistry department personnel may not have had sufficient system training. A recent violation (violation 1 in the surveillance section below) was the result of lack of attention by chemistry personnel, and procedure inadequacy. The root cause which led to this violation had been previously identified by Florida Power Corporation and corrective actions initiated. However, the corrective actions were not sufficient to prevent this recent violation.

A post accident sampling system (PASS) inspection identified the system to be inoperable due to its inability to return a sample to containment in accordance with the licensee's procedure. This resulted from conflicting procedures creating contradictory valve alignments. The licensee had not determined the system to be inoperable because they were unaware of the contradictory procedures.

The following violations were identified and are not indicative of a programmatic breakdown:

a. Severity Level IV violation for failure to identify that the PASS was inoperable.

b. Severity Level IV violation for failure to follow Chemistry and Radiation Protection procedures.

c. Severity Level V violation for failure to adequately determine the quantity of radioactive material delivered for transport.

d. Severity Level V violation for failure to use properly calibrated equipment to perform instrument calibrations.

e. Severity Level V violation for use of a chain and padlock to control access to a high radiation area.

2. Conclusion

Category: 2

Trend: Constant

3. Board Recommendations

Management attention in this area was evident. It appears, however, that additional management attention is needed to address weaknesses in the training of chemistry personnel and procedural compliance. No change in the level of NRC staff resources applied to the routine inspection program is recommended.

C. Maintenance

1. Analysis

During this evaluation period, inspections were conducted by the resident inspection staff.

The maintenance program continued to show improvement due to high management involvement in maintenance planning and practices. There continued to be improvement in the area of procedure adherence. First line supervisors and maintenance personnel continued to indicate a high awareness for procedure adherence. The maintenance department has made substantial progress in revising procedures to make them more user-oriented. This contributed to the improved procedure adherence attitudes of facility personnel.

In most areas, the licensee's approach to the resolution of technical issues continued to be sound. This was evidenced by the conservative decision to replace reactor coolant pump seals showing degradation, final resolution of the hydraulic snubber failure problem, replacement of the leaking steam generator feedwater nozzle, and the replacement/repair of plant equipment when degradation evidence was indicated by the predictive maintenance program.

Preplanning for outages was a strength of the maintenance program. Even for outages of short duration, the work was properly planned with regard to scope, repair parts and work procedures. The use of a predictive maintenance analysis was a strength of the licensee's program. This technique has enabled the licensee to predict degrading trends in equipment performance and effect repairs before equipment failure occurs. Additionally, the licensee has coordinated the surveillance testing of equipment with the preventive maintenance program to minimize equipment downtime and excessive equipment starts.

The weakness identified by violation b, failure to properly schedule or plan a maintenance activity, has been strengthened through the requirement that representatives from the various shops attend the shift turnover meetings held at the beginning of

each operating shift. Observations by the NRC indicate that this has been effective in assuring that the operations shift was aware of ongoing plant activities.

The licensee was still very reliant on contractor personnel to conduct a major portion of their plant modifications and to perform selective testing. An apparent problem continued to exist in those instances where large tasks were turned over to a contractor without direct licensee management oversight to ensure adequate control. Violations a and c were the result of the inadequate control placed over contractor personnel under such circumstances.

An observed weakness during the previous SALP period, failure to follow codes and regulatory requirements, has been corrected.

Three violations were identified and are not indicative of a programmatic breakdown:

a. Severity Level IV violation for failure to conduct adequate post maintenance/modification inspections resulting in equipment not being returned to proper status.

b. Severity Level IV violations for failure to properly schedule or plan a maintenance activity.

c. Severity Level IV violations for failure to follow a maintenance procedure.

2. Conclusion

Category: 1

Trend: Improving

3. Board Recommendations

A high level of performance was achieved in this area, however, increased management oversight of contractor activities appears warranted. The Board was particularly impressed with the success of the licensee's predictive maintenance program.

Because licensee performance at a Category 1 level has only been recently achieved, and because NRC inspection activity in this area has been limited, no change in the level of NRC staff resources applied to the routine inspection program is recommended.

D. Surveillance

1. Analysis

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

Two weaknesses evident in the surveillance area were the methods of issuing new procedures and revising existing procedures. The surveillance procedure responsibility has been assigned to the plant engineering and technical services group. There were indications that this group had insufficient input from other groups (e.g., operations, instrumentation and control, etc.) which contributed to the issuance of inadequate surveillance test procedures.

There has also been a continuing problem in the instrumentation calibration program. This problem was originally identified during the last SALP period. The weaknesses in the licensee's corrective action program and control of contracted personnel contributed to these problems. The licensee has expended considerable effort in utilizing its own personnel to resolve these problems and in providing an effective calibration program. Initial review efforts by NRC indicate that the licensee's efforts should be effective in improving the calibration program.

Routine and post-refueling core performance tests were witnessed and the results reviewed. All of the associated surveillance procedures were adequate and were acceptably performed. Independent measurements of reactor coolant system leakage gave acceptable results. However, the licensee's surveillance procedure in use at the time did not provide corrections for changes in average temperature or pressurizer level. The need for such corrections had been identified to the licensee several months prior to the inspection; however, it took an excessively long time for the corrections to be added to the procedure.

An additional area of weakness involved microfilming. Microfilm records of surveillance procedures were found to have been poorly organized prior to microfilming. The microfilms were unreadable in many cases. There were no apparent standards imposed on the quality of the material to be filmed.

Inspections were performed in the area of inservice testing (IST) of pumps and valves. One weakness identified in this area was that the licensee was not maintaining a summary listing of the status of the IST pumps and valves.

An inspection was made of the licensee's secondary water chemistry program. It was noted that while the licensee has not fully endorsed the "Steam Generator Owners Group/Electrical Power Research Institute" guidelines, the water chemistry program was considered acceptable and was being implemented by well trained personnel using state-of-the-art sampling systems and analytical instrumentation. Some items of technical concern were being reviewed by licensee management because of serious economic questions which must be answered. These concerns included continual failure of CuNi condenser tubes; rapid depletion of the condensate cleaning system; and the seemingly generic issue of the build-up of sludge in the once-through steam generators to the point that power reductions were required because of secondary flow problems.

During the evaluation period, an inspection in the area of containment leak rate testing was performed involving the witnessing of the containment integrated leak rate test (CILRT). No deviations or violations were identified. Management involvement in planning and performance of the CILRT was satisfactory. The test procedure was in compliance with Appendix J to 10 CFR 50. Test deviations were minor and quickly resolved.

Violations in this area have covered all aspects of surveillance testing including failure to adhere to procedures (5 violations), failure to perform surveillance testing when required (3 violations), failure to perform adequate surveillance tests (2 violations), and failure to use calibrated instrumentation during the performance of surveillance testing (3 violations).

Many of these violations were recurrent in nature which indicates that the licensee's corrective actions have not been effective. For example, two of the violations (violations e and i), involving the use of uncalibrated instrumentation, occurred on two separate occasions during the performance of the same surveillance test procedure by operations personnel. Violation m, again involving use of an uncalibrated instrument, was also caused by operations personnel. If adequate corrective actions were taken when violation m had occurred (i.e., ensuring that all personnel verified use of calibrated instrumentation prior to test performance), then violations e and i may not have occurred.

Fourteen violations were identified:

a. Severity Level IV violation for failure to perform a surveillance every 72 hours.

b. Severity Level IV violation for failure to follow surveillance procedures.

c. Severity Level IV violation for failure to perform an adequate surveillance test.

d. Proposed Severity Level IV violation for failure to follow a surveillance procedure.

e. Severity Level IV violation for failure to use calibrated instrumentation during performance of a surveillance requirement.

f. Severity Level IV violation for failure to follow surveillance procedures and for failure of supervisors to review completed surveillance data to detect anomalies.

g. Severity Level IV violation for failure to perform an instrument calibration.

h. Severity Level IV violation for failure to follow surveillance procedures.

i. Severity Level IV violation for failure to use a calibrated instrument during the performance of a surveillance procedure.

j. Severity Level IV violation for an inadequate surveillance procedure.

k. Severity Level IV violation for failure to follow surveillance procedures.

l. Severity Level IV violation for failure to perform a surveillance test after a greater than 15% power change.

m. Severity Level V violation for failure to use a calibrated instrument during the performance of a surveillance requirement.

n. Severity Level V violation for failure to maintain a summary list of pumps and valves to display the current status of the test program.

2. Conclusion

Category: 3

Trend: Declining

3. Board Recommendations

Management involvement in this area should be increased. Greater quality assurance involvement in surveillance activities, and increased management oversight of this quality assurance involvement and of the implementation of corrective actions to prevent recurrent problems, are needed. The Board recommends that NRC staff resources applied to the routine inspection program be increased.

E. Fire Protection

1. Analysis

During this assessment period, limited inspections were conducted by the resident inspection staff. These inspections encompassed the implementation of the plant's fire protection program. No discreprancies were identified. The most recent in-depth review of the licensee's fire protection program was in November 1981.

2. Conclusion

Category: Not Rated

Trend: Not Determined

3. Board Comment

There was insufficient activity in this area during the appraisal period to justify a rating.

F. Emergency Preparedness

1. Analysis

During the assessment period, inspections were performed by the resident and regional inspection staffs. These included observation of an exercise, and inspections addressing emergency responses and related implementing procedures. The exercise involved substantial State and local participation.

Routine inspections and exercise observations disclosed that the emergency organization and staffing were adequate. An adequately staffed corporate emergency planning organization provided support to the plant. Key positions in the corporate and plant emergency response organizations were filled. Corporate management was directly included in the annual exercise and followup critique. The licensee has been responsive to NRC initiatives.

During the last evaluation period, the need for management attention to training of personnel assigned to emergency organizations was identified. Although improvement in this area was achieved and most of the outstanding training items were resolved, training weaknesses continued to persist. More than one third of the inspector followup items identified during the current evaluation period involved training. Weaknesses were largely confined to team activities and procedural reviews. These issues are expected to be closed during 1985. Generally, however, key personnel assigned to emergency organizations were cognizant of their responsibilities and authorities, and understood their assigned functions during routine operations and simulated emergency situations.

The following essential elements for emergency response were found acceptable: Emergency worker protection; post accident measurements and instrumentation; changes to the emergency preparedness program; and annual quality assurance audits of plant and corporate emergency planning programs. The exercise demonstrated that the emergency plan and procedures could be implemented by the licensee's staff, although some difficulties were noted in the adequacy of radiological assessment and prompt notification procedures, and the transfer of authority from the Shift Supervisor to the Emergency Coordinator. Observation of the subject exercise disclosed one violation regarding the adequacy of radiological assessment.

An adequate working relationship appeared to exist between the licensee and offsite emergency support agencies.

During this evaluation period, three violations were identified regarding the licensee's implementation of the Emergency Planning Program and procedures and related Technical Specifications. The violations are listed below.

a. Severity Level IV violation disclosed an inadequate implementing procedure addressing the "Initial Assessment" portion of EM-204, "Release and Offsite Dose Assessment during Radiological Emergencies at CR-3."

b. Severity Level V violation for a failure to specify the use of the child thyroid dose in making dose assessments.

c. Severity Level V violation for a failure to maintain written procedures for emergency plan implementation.

2. Conclusion

Category: 2

Trend: Constant

3. Board Recommendations

Management attention in this area was evident, however, additional attention and program improvements are needed in the area of radiological assessment of emergencies. No change in the level of NRC staff resources applied to the routine inspection program is recommended.

G. Security

1. Analysis

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

Although the licensee demonstrated some evidence of prior planning and prioritization of safeguards matters, there remained a long standing regulatory issue relating to the functional capability of the protected area intrusion detection system. The licensee has initiated a study to address this issue, however, a schedule for implementation and completion of adequate corrective action has not yet been established. Aggressive management attention and involvement are needed to ensure improvement in this area.

Inspection observations and findings indicate that the licensee tended to rely on the NRC to identify problems and contractors to provide solutions rather than maintaining a rigorous self-audit and evaluation program. In addition, licensee personnel did not always exhibit a thorough understanding of the approved physical security plan and associated procedures. The apparent lack of program understanding resulted in six of the violations identified. The continued occurrence of violations that adversely impact security effectiveness indicates inadequate management support of the security program.

The licensee was generally responsive to NRC concerns. In response to one such concern, the licensee completely revised the physical security plan to improve its readability and reduce internal inconsistencies and ambiguities.

The licensee maintained an effective security training qualification program which has produced well-trained security personnel. The licensee security management staff and the contractor security force were adequately staffed.

Although one violation resulted from the licensee's failure to report a safeguards event within the prescribed time, required reports were generally provided in a timely manner.

The violations indentified below, of which item a. was cited as a Severity Level III problem and associated civil penalty, resulted in general from inadequate understanding and support of the security program by licensee management and failure of personnel to adhere to established procedures. It should be noted that late in the assessment period, there was an apparent improvement in management support of the security program. However, this trend occurred too late to show a meaningful improvement during this period.

a. Proposed Severity Level III problem composed of two violations for failure to fully implement and maintain in effect certain provisions of the NRC approved physical security plan.

b. Severity Level IV violation for failure to identify an unsecured opening in a Vital Area barrier.

c. Severity Level IV violation for having an unescorted visitor in a Vital Area.

d. Severity Level IV violation for failure to provide portions of the alarm system with a tamper-indication feature.

e. Severity Level IV violation for failure to control protected area access.

f. Severity Level IV violation for failure to maintain security equipment in an operable condition.

g. Severity Level IV violation for failure to report a safeguards event within prescribed time limits.

2. Conclusion

Category: 3

Trend: Declining

3. Board Recommendations

Licensee management attention and involvement in this area should be increased and security issues should be viewed with a higher priority by management. The Board recommends that NRC staff resources applied to the routine inspection program be increased.

H. Refueling

1. Analysis

No refueling outage occurred during the assessment period.

2. Conclusion

Category: Not Rated

Trend: Not Determined

3. Board Recommendations

Because no refueling outages occurred during the assessment period, there was insufficient inspection activity to justify a rating.

I. Quality Programs and Administrative Controls Affecting Quality

1. Analysis

During this assessment period, inspections were performed by the resident inspection staff.

On June 10, 1983, the licensee submitted for NRC review, a revised Quality Assurance (QA) program. Comments were generated by NRC based upon a review of the program and were submitted to the licensee. Based on a meeting held between NRC and the licensee to discuss the QA Program and the licensee's response to NRC questions, the QA program description was considered acceptable.

Problems were identified during this assessment period concerning the licensee's corrective action system. A problem had been previously identified with the correction and maintenance of procedures. In an attempt to verify licensee corrective action on this issue, NRC personnel walked down five safety-related systems. Additional problems were identified in that procedure valve line-ups did not accurately reflect actual plant conditions. This resulted in violation a listed below.

The licensee's response included procedure revisions addressing the specific inadequacies identified, and a plant walkdown of additional systems. The long-term corrective action included establishment of policy for the type of valves to be included in valve line-ups.

During the previous SALP reporting period, a problem was identified with the calibration of Section XI instruments used for testing. In addition to calibrating the necessary instrumentation prior to the Cycle 5 startup, the licensee's corrective action included an evaluation of all systems which were subject to IST requirements to determine if any were inoperable due to out-of-calibration instrumentation. While attempting to verify completion of the licensee's corrective action, the NRC identified that not all IST related instrumentation had been calibrated and that the evaluation of the effect of uncalibrated instrumentation upon the operability of systems was not performed. This resulted in the deviation listed below.

Both of the above problems required timely and definitive corrective action. The final corrective action for both items was adequate; however, management attention was not sufficiently focused to assure that commitments were completed within stated timeframes.

These two examples, when combined with examples discussed in the surveillance section of this report, indicate a lack of management corrective action control. The corrective action system in these examples was not complete, did not prevent recurrence, and was not timely within the boundary established by management.

One violation and one deviation were identified:

a. Severity Level IV violation for failure to complete corrective action as specified in response to an NRC violation.

b. Deviation for failure to complete corrective action in response to an NRC violation.

2. Conclusion

Category: 2

Trend: Declining

3. Board Recommendations

Management involvement in this area was evident. However, licensee management should ensure that attention is directed to the quality assurance staff's effective involvement with all facility programs affecting quality. No change in the level of NRC staff resources applied to the routine inspection program is recommended.

J. Licensing Activities

1. Analysis

The licensee continued to modify its management structure by adding a layer of management between the licensing and engineering organizations, and the Vice President, Nuclear. This should have the effect of increasing the management attention devoted to these organizations. The licensee has developed an effective computerized tracking system for its NRC licensing commitments, and an excellent program to track progress on items in the equipment qualification program. Improvement has been noted in the extent and consistency of management involvement and control since the last SALP report. This is illustrated by the demonstrated increased management involvement brought to bear in finally resolving an auxiliary feedwater system issue, and by the effective performance in resolving environmental qualification issues. On the other hand, issues of less significance did not always attract sufficient management attention. A logical extension of these efforts would include application to integrated schedules for all principal plant activities.

In general, the licensee's approach to resolution of technical issues demonstrated an adequate understanding of those issues and resulted in sound and timely resolutions. In the area of environmental qualification, the licensee's action was prompt and effective in producing sound substantiation of qualification. However, in some areas, this was not always the case. Licensee approaches to the resolution of issues sometimes lacked thoroughness and depth. For example, in the Technical Specification amendment for the decay heat removal system, the licensee's submittal did not include an adequate safety evaluation. In the licensee's original proposal for modified steam generator operating level limits, the licensee requested a maximum level which had not been shown to be acceptable, and in the issue of an alternate off-site power supply, the licensee initially and unnecessarily requested an emergency Technical Specification amendment. Finally, the licensee's approach to the request to vent the containment on a one-time basis to relieve high containment pressure did not indicate that adequate prior planning had taken place to avoid the problem, or that the proposed resolution had been thoroughly thought through. In all the cases which have been completed, adequate resolution was obtained after interaction with the NRC staff.

Responsiveness to NRC licensing matters was in general considered adequate. In the area of the auxiliary feedwater system evaluation, responsiveness was considerably improved, leading to timely resolution of outstanding issues. Similarly, the licensee

responded quickly and well to an environmental qualification meeting and to subsequent staff requests for additional information. Several other individual actions were also rated highly with regard to responsiveness. On the other hand, the licensee required frequent extensions of time to respond to NRC requests for additional information regarding the post-accident sampling system review. Unresolved issues still remain in this area.

In summary, the licensee's responsiveness was generally judged to be timely and prompt. Management involvement has increased and is judged to be good and the licensee's approach to resolution of technical issues demonstrated an adequate understanding in some areas but in other areas, a lack of thoroughness caused delays in the timely resolution of technical issues.

2. Conclusion

Category: 2

Trend: Improving

3. Board Recommendations

More attention to detail during the next SALP period could produce a Category 1 rating.

V. SUPPORTING DATA AND SUMMARIES

A. Licensee Activities

During the assessment period, the major licensee activities at Crystal River included: normal power operations; post refueling start-up testing; Type A containment integrated leak rate test; replacement of leaking feedwater nozzle on a once-through steam generator; inspection of inaccessible hydraulic snubbers; and replacement of control rod drive stators.

B. Inspection Activities

During the assessment period, the routine inspection program was conducted by the resident and regional inspector staff.

C. Licensing Activities

The performance assessment was based on NRC evaluation of the licensee's performance in support of licensing actions that had a significant level of activity during the evaluation period. These actions included licensee requests for license amendments and for exemptions or relief from regulatory requirements, responses to generic letters, and various submittals of information for multi-plant and TMI items. Active actions during this period are classified below. A total of 39 licensing actions were completed.

- 23 Plant-specific actions (19 completed): Actions included in this category which were used to provide input for this evaluation were:

  - On-Line Emergency Safeguards Logic Testing
  - Fuel Pool Enrichment Limit
  - Proposed Alternate Off-Site Power Supply
  - Decay Heat Removal System
  - Administrative Control of Containment Isolation Valves
  - Physical Security Plan Revisions
  - High Radiation Area Technical Specifications (TS)
  - Steam Generator Operating Level Limits
  - Auxiliary Building Ventilation System TS

- 16 Multi-plant actions (9 completed): Actions included in this category which were used to provide input for this evaluation were:

  - Control of Heavy Loads
  - Masonry Wall Design
  - Automatic Actuation of Shunt Trip Attachment
  - Environmental Qualification of Safety-Related Electrical Equipment
  - Appendix I Review
  - Asymmetric LOCA Loads

- 18 TMI (NUREG-0737) actions (11 completed): Actions included in this category which were used to provide input for this evaluation were:

  - Post-Accident Sampling Modifications
  - Auxiliary Feedwater System Evaluation
  - High Point Vents
  - ECC System Outages

D. Investigations and Allegations Review

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

E. Escalated Enforcement Actions

1. Civil Penalties

One civil penalty of $50,000 was proposed for a Severity Level III violation involving failure to fully implement and maintain provisions for the physical security plan regarding vital area protection. (Issue Date: January 10, 1985)

2. Orders (only those relating to enforcement)

No orders relating to enforcement matters were issued.

F. Management Conferences Held During Appraisal Period

An enforcement conference was held on September 2, 1983, to discuss an apparent violation associated with vital area safeguards measures.

A management meeting was held on October 20, 1983, to review the results of the first phase of NRC's appraisal of the licensee's regulatory performance.

A management meeting was held on December 20, 1983, to discuss a forthcoming 10 CFR 50.54(p) change and other security related topics.

A management meeting was held on February 14, 1984, to discuss the licensee's current management activities and future plans.

A management meeting was held on May 30, 1984, to discuss federal field exercise experience, current regulatory requirements in the emergency planning area, and scenario development issues.

A management meeting was held on June 6, 1984, to discuss the optional quality assurance program.

An enforcement conference was held on September 6, 1984, to discuss three separate issues: failure to provide adequate vital area barriers; failure to adhere to facility procedures; and calibration program deficiencies.

G. Confirmation of Action Letters

No Confirmation of Action Letters were issued during this assessment period.

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

During the assessment period, there were 55 LERs reported for the facility. The distribution of these events by cause, as determined by the NRC staff, was as follows:

Cause	# LERs
Component Failure	23
Design	2
Construction, Fabrication, or Installation	2
Personnel - Operating Activity	5

Cause	# LERs
- Maintenance Activity	5
- Test/Calibration Activity	8
- Other	3
Out of Calibration	1
Other	6
TOTAL	55

It was noted that 80% of the LERs fell into two categories: component failures (42%); and personnel error (38%).

I. Inspection Activity and Enforcement

FUNCTIONAL AREA	NO. OF VIOLATIONS IN EACH SEVERITY LEVEL V	IV	III	II	I
Plant Operations	1	2			
Radiological Controls	3	2			
Maintenance		3			
Surveillance	2	12**			
Fire Protection					
Emergency Preparedness	2	1			
Security		6	1*		
Refueling					
Quality Programs and Administrative Controls Affecting Quality		1			
TOTAL	8	27**	1*		

* This represents a proposed Severity Level III problem composed of two violations in the area of security.

** One of the twelve Severity Level IV violations in the area of surveillance is proposed.