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U.S. NUCLEAR REGULATORY COMMISSION  
REGION II

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SYSTEMATIC ASSESSMENT OF  
LICENSEE PERFORMANCE  
BOARD ASSESSMENT

SOUTH CAROLINA ELECTRIC AND GAS COMPANY  
VIRGIL C. SUMMER NUCLEAR STATION  
DOCKET NUMBER 50-395  
MARCH 1, 1983 THROUGH JUNE 30, 1984

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## CONTENTS

	<u>PAGE</u>
I. INTRODUCTION .....	1
II. CRITERIA .....	1
III. SUMMARY OF RESULTS .....	2
A. Overall Utility Evaluation .....	2
B. Overall Facility Evaluation - V. C. Summer .....	2
C. Facility Performance - V. C. Summer .....	3
D. SALP Board Members .....	3
E. SALP Board Attendees .....	3
IV. PERFORMANCE ANALYSIS FOR V. C. SUMMER .....	4
A. Functional Area Evaluations .....	5
B. Supporting Data .....	20

## I. INTRODUCTION

A formal licensee performance assessment program has been implemented in accordance with the procedures discussed in the Federal Register Notice of March 22, 1982. This program, the Systematic Assessment of Licensee Performance (SALP), is applicable to each operator of a power reactor or holder of a construction permit (hereinafter referred to as licensee). The SALP program is an integrated NRC staff effort to collect available observations of licensee performance on a periodic basis and evaluate performance based on these observations. Positive and negative attributes of licensee performance are considered with emphasis placed on understanding the reasons for a licensee's performance in important functional areas, and sharing this understanding with the licensee. The SALP process is oriented toward furthering NRC's understanding of the manner in which: (1) the licensee directs, guides, and provides resources for assuring plant safety; and (2) such resources are used and applied. The integrated SALP assessment is intended to be sufficiently diagnostic to provide meaningful guidance to the licensee. The SALP program supplements the normal regulatory processes used to ensure compliance with NRC rules and regulations.

## II. CRITERIA

Licensee performance is assessed in selected functional areas depending on whether the facility has been in the construction, preoperational, or operating phase during the SALP review period. These functional areas encompass the spectrum of regulatory programs and represent significant nuclear and environmental activities. Functional areas may not be assessed because of little or no licensee activities in these areas, or lack of meaningful NRC observations.

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

- . Management involvement in assuring quality
- . Approach to the resolution of technical issues from a safety standpoint
- . Responsiveness to NRC initiatives
- . Enforcement history
- . Reporting and analysis of reportable events
- . Staffing (including management)
- . Training effectiveness and qualification

The SALP Board has categorized functional area performance at one of three performance levels. These levels are defined as follows:

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 such 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 such 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 such 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 categorization is meant to describe the general or prevailing tendency (the performance gradient) during the SALP period. The performance trends are defined as follows:

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

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

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

### III. SUMMARY OF RESULTS

#### A. Overall Utility Evaluation

South Carolina Electric and Gas Company's corporate organization was well managed and technically competent. They exhibited excellent control over the nuclear power plant and were involved in the day-to-day operations. Involvement by high level corporate officials was displayed by their routine presence on site. The corporate staff was responsive to NRC concerns and they aggressively pursued technical issues to proper resolution, with the safe operation of the plant being their prime consideration.

#### B. Overall Facility Evaluation

The V. C. Summer Nuclear Station was well managed. The licensee displayed an aggressive, safety-conscious attitude toward correcting problems. The plant staff cooperated well with NRC. They were technically competent and dedicated to safe operation of the plant. The licensee applied resources as necessary to solve technical issues and safety concerns. Major strengths were identified in the areas of radiological controls, maintenance, emergency preparedness, and security and safeguards. No major weaknesses were identified.

## C. Facility Performance

Tabulation of ratings for each functional area:

## Operations

	<u>Functional Area</u>	<u>Category Rating</u>	<u>Trend During This Period</u>
1.	Plant Operations	2	Improved
2.	Radiological Controls	1	Same
3.	Maintenance	1	Same
4.	Surveillance	2	Improved
5.	Fire Protection	2	Improved
6.	Emergency Preparedness	1	Same
7.	Security and Safeguards	1	Same
8.	Refueling	Not Rated	Not Determined
9.	Licensing Activities	2	Same
10.	Quality Assurance Program	2	Same

## D. SALP Board Members

- R. C. Lewis, Director, Division of Reactor Projects (DRP), Region II (RII), Chairman
- J. A. Olshinski, Director, Division of Reactor Safety (DRS), RII
- J. P. Stohr, Director, Division of Radiation Safety and Safeguards (DRSS), RII
- D. M. Verrelli, Chief, Project Branch 1, DRP, RII
- E. G. Adensam, Chief, Licensing Branch 4, Division of Licensing (DL), Office of Nuclear Reactor Regulation (NRR)

## E. SALP Board Attendees

- F. S. Cantrell, Chief, Project Section 1B, DRP, RII
- M. V. Sinkule, Chief, Technical Support Staff (TSS), DRP, RII
- C. W. Hehl, Senior Resident Inspector, DRP, RII
- R. C. Butcher, Project Engineer, Project Section 1B, DRP, RII
- J. B. Hopkins, Project Manager, Licensing Branch 4, DL, NRR
- T. C. MacArthur, Radiation Specialist, TSS, DRP, RII
- W. E. Cline, Chief, Emergency Preparedness Section, DRSS, RII
- C. M. Upright, Chief, Quality Assurance Program Section, DRS, RII
- W. W. Peery, Radiation Specialist, Facilities Radiation Protection Section, DRSS, RII

#### IV. PERFORMANCE ANALYSIS FOR V. C. SUMMER

## A. Functional Area Evaluations

### Licensee Activities

During the first few weeks of the appraisal period, the unit was limited to 50% power pending a feedwater modification to the Westinghouse D3 steam generators. Limited intervals of power operation above 50% power were permitted for power operations testing. The unit was shut down on March 17, 1983 for steam generator modification work and was returned to power on May 22, 1983 with no power level restriction up to 100 percent power. The plant was shut down on November 23, 1983 for a planned outage to perform steam generator tube eddy current examinations. Test results were satisfactory with no tubes being plugged. The unit was returned to power on December 14, 1983. The unit started commercial operation on January 1, 1984. The unit was shut down on March 23, 1984, for a scheduled maintenance outage and was returned to power on April 22, 1984. An Institute of Nuclear Power Operation (INPO) inspection was conducted from April 21 through May 4, 1984 and from May 14 through May 21, 1984. On April 25, 1984, the unit inadvertently scrambled and remained shut down until May 3, 1984 due to main condenser tube leakage and internal condenser repairs. The unit remained at power for the remainder of the period except for a brief shutdown on May 5, 1984 for modifications to the feedwater regulating valves.

### Inspection Activities

Routine NRC inspections were performed during this evaluation period. Coordinated emergency response exercises were conducted from March 14 through 17, 1983 and from March 20 through 22, 1984 to evaluate the licensee's emergency preparedness organization, staffing and implementation of the emergency procedures. Three site visits were conducted to examine operator license candidates. Two inspections were conducted to review the startup testing program for the 75 and 100 percent power plateaus.

#### 1. Plant Operations

##### a. Analysis

During the evaluation period inspections were performed by the resident and regional inspection staffs. The licensee's key positions were identified and authorities and responsibilities were defined. The licensee's supervisory staff was knowledgeable and proficient in day-to-day plant operations. A number of unplanned reactor trips, of which a significant number were attributable to personnel error, occurred during routine startup operations, indicating a need for additional training. The licensee responded to this need by providing the operating crews with additional simulator training on normal plant evolutions such as startups. The licensee

generally took quick, positive steps on NRC identified violations and was very cooperative. Licensee responsiveness to NRC initiatives was demonstrated by their response to NRC concerns about the number of components that failed to properly perform during the main turbine generator load reduction event of September 12, 1983. The licensee presented the results of their investigation in a meeting in Region II on September 16, 1983. The event report was thorough and complete.

The licensee provided adequate event reports during the assessment period. In addition to Licensee Event Reports (LERs), the licensee submitted a number of special reports describing particular events or maintenance activities in detail. The licensee's corrective actions for reportable events were not always effective as indicated by occasional repetition. An example which occurred near the close of the assessment period was related to violation (11) where slave relay continuity checks to all associated testable actuation devices had not been conducted. The licensee's initial listing of slave relays that required this quarterly continuity testing was incomplete. Subsequently, other slave relays that had not been included were identified by the licensee. This indicated a lack of thoroughness in the licensee's corrective action program.

During the SALP assessment period, the NRC conducted two site visits for the purpose of examining replacement license candidates. Seventy-three percent of the Reactor Operators (ROs) (11 of 15), and 58 percent of the Senior Reactor Operators (SROs) (7 of 12), passed the first set of examinations. Three of the four ROs and four of the five SROs who retook the examination were successful in the second attempt.

In February 1984, a third site visit was conducted where partial NRC requalification examinations were administered to 22 licensed ROs and SROs. The written examinations consisted of replacing two categories of the V. C. Summer administered test with similar categories written by the NRC. Nineteen of the twenty-two ROs and SROs passed this examination. The three failures also failed other portions of the examination prepared by the V. C. Summer training staff. The consistency between the NRC supplied portions and the licensee supplied portions of the examination is indicative of a high quality requalification program.

Two inspections addressed the review of the startup testing program at the 75 and 100 percent power plateaus including the review of some associated surveillance tests. No violations or deviations were identified in the area of startup testing. Further, in witnessing some of the tests and



discussing others with licensee test personnel, it was clear that those personnel engaged in testing were properly prepared for the activities and understood the purpose of the testing. Test results were reviewed promptly and thoroughly by first-line supervision. Higher management appeared to be aware of test problems and successes. The licensee's performance during startup testing was considered to be satisfactory.

Violations identified in the area of plant operations, in general, fell into three categories: failure to inform operations personnel of activities affecting plant operations as noted in violations (1) and (14) below; violations of plant operational limits as noted in (2), (6), (7), (8), (11) and (12) below; and violations of safety related administrative requirements as noted in (3), (4), (5), (9), (10), and (13) below. An enforcement conference was held in the Region II office on June 7, 1983, to discuss the events associated with violations (5), (6), (7) and (8) [and violation (1) in the maintenance section]. At the enforcement conference of June 7, 1983, the licensee stated that the root cause of the violations discussed were attributed to personnel error in judgement, failure of operations personnel to comply with programmatic controls and lack of adequate attention to details in implementing programs. Additional training of operating crews on normal plant evolutions was conducted by the licensee. Also, the NRC requested the licensee to describe those actions taken or planned to improve the effectiveness of the operating shifts during subsequent outages as a result of violation (12) describing two apparent losses of operating shift awareness of safety system status during an outage.

Fourteen violations were identified in this area:

- (1) Severity Level IV violation for failure to ensure that reactor operators and senior operators were knowledgeable of facility design changes, procedure changes, and license changes.
- (2) Severity Level IV violation for an inadequate procedure which failed to provide for removal of power to residual heat removal valves when trouble shooting steam generator blow down valves.
- (3) Severity Level IV violation for failure of the Plant Safety Review Committee to review station administrative procedures and changes thereto.

- (4) Severity Level IV violation for failure to perform a written safety evaluation prior to rendering valves supplying service water to the component cooling water system inoperable.
- (5) Severity level IV violation for failure to have a senior reactor operator in the control room.
- (6) Severity Level IV violation for failure to implement procedures in that no action was taken in response to an alarm on the digital metal impact monitoring system; and for utilizing superseded procedures.
- (7) Severity Level IV violation for failure to meet Technical Specification action statements when exceeding a limiting condition for operation by not placing a feedwater flow channel in a tripped condition within an hour; failure to establish a continuous fire watch when a sprinkler system became inoperable; and failure to return the emergency feedwater pump speed controller to its normal position.
- (8) Severity Level IV violation for failure to energize required heat tracing during startup.
- (9) Severity Level IV violation for failure to submit a required monthly report to the station manager and failure to trend operating experience events.
- (10) Severity Level IV violation for using "For Information Only" drawings to perform work.
- (11) Severity Level IV violation for failure to conduct required continuity tests prior to entering an operating mode where tests were required to have been accomplished.
- (12) Severity Level IV violation for failure to implement procedures in that inadequate evaluations were performed prior to performing activities which rendered the designated on-line boron charging system inoperable; failure to inform an on-coming operator of plant status; and failure to perform necessary reviews prior to removal of a locking tab from a valve.
- (13) Severity Level V violation for failure to have a procedure for each safety related annunciator on the diesel generator local control panels.
- (14) Severity Level V violation for failure to document that required reading had been performed.

b. Conclusion

Category: 2

Trend: Improved

c. Board Comments

Performance in this area was evaluated as Category 2 during the previous SALP assessment. Licensee management attention was evident in this area. The number of violations decreased in the latter portion of this assessment period; however, management attention should continue. No decrease in NRC attention in this area is recommended.

2. Radiological Controls

a. Analysis

During the evaluation period, inspections were performed by the resident and regional inspection staffs. This included one confirmatory measurements inspection and one liquid and gaseous waste management inspection.

The licensee had an adequate and qualified health physics staff for normal operations and outages. A corporate Health Physicist continued to provide assistance to the plant staff in radiological matters.

The licensee's worker dose ALARA program was effective during normal operations. The ALARA program was very effective during an outage from March to May 1983. However, the program was not as effective at reducing worker doses during an outage in November and December 1983. Although there was good preplanning for the November through December 1983 outage, additional surveillance and maintenance work was added toward the end of the outage. The schedule for this additional work did not provide adequate time for preplanning tasks to incorporate dose reducing elements normally found during such activities. In a later outage in March 1984, preplanning was very good and the ALARA program was very effective for this outage.

The licensee has emphasized solid waste reduction with success during normal operations; however, as may be expected, solid waste shipments have increased during outage periods.

During this assessment period, the licensee's engineering controls, radiation work permit program, and respiratory protection program were found to be satisfactory. Control of contamination and radioactive materials within the facility has been excellent. There were very few contaminated areas, as compared with other operating facilities. The licensee's health physics staff provided full and effective radiological protection coverage for work performed near the close of the assessment period which involved replacement of fuel racks in the spent fuel pool utilizing divers to perform the work.

The licensee's management was aggressive in identifying potential problem areas and seeking improvements to the liquid radwaste management issue discussed below. The licensee has been responsive to the concerns of the NRC and corrective actions with regard to previously identified weaknesses were effective.

The licensee was responsive to NRC initiatives and the resolution of technical issues was sound. For example, during the period, the number of batch releases of radioactive liquid wastes was unusually high (346 releases during the period July to December 1983). While these releases were within the Technical Specification limits, below 10 CFR Part 20 limits, within the design objectives of Appendix I to 10 CFR Part 50, and in conformance with ALARA principles, the releases were not generally consistent with the early operating phase of a nuclear power plant. The licensee recognized the problem and initiated a program of remedial actions in which the source (the presence of organic materials, principally soaps and detergents in the liquid radwaste system) was identified, steps were taken to minimize the problem, and the liquid radwaste evaporator was placed in service ahead of schedule. At the close of the assessment period, the licensee was also considering the use of portable demineralizers incorporating activated charcoal to remove organic materials. These actions reflected management awareness and willingness to take prompt corrective measures.

Radioactive gaseous effluents were within the applicable limits and were in conformance with ALARA principles. Gaseous radwaste treatment systems were adequately maintained and tested in accordance with Technical Specification requirements and no problems were identified in these areas.

One quality control and confirmatory measurements inspection was performed during the evaluation period using the Region II mobile laboratory. Correction of weaknesses identified in earlier inspections demonstrated licensee responsiveness to resolving problems identified by the NRC.

The results of samples analyzed showed agreement. The results of several types of samples were systematically high compared to NRC results, but within the acceptance criteria. The quality control program in chemistry and radiochemistry was consistent with Regulatory Guide 4.15. The chemistry and radiochemistry program was well managed with adequate management involvement and staffing. Quality control for radioactivity measurements was provided by National Bureau of Standards traceable calibration sources, by cross-checks, and by analyses of spiked samples. Quality control for contracted services was audited regularly by the corporate Quality Assurance Department.

The V. C. Summer plant had operated for only a short period at the time of the last SALP. The current assessment period offered a much better opportunity to evaluate the implementation of the radiological controls program. Results of this evaluation indicate that the program was well managed and continued to operate effectively.

Two violations were identified in this area:

- (1) Severity Level IV violation for failure to follow a procedure during a liquid waste discharge.
- (2) Severity Level IV violation for failure to follow a procedure requiring alternation of gas decay tanks every two days.

b. Conclusion

Category: 1

Trend: Same

c. Board Comments

Performance in this area was evaluated as Category 1 during the previous SALP assessment. Licensee resources appeared to be ample in this area. No decrease in licensee or NRC attention in this area is recommended.

3. Maintenance

a. Analysis

During the evaluation period, inspections were performed by the resident inspector. Extensive maintenance associated with the Westinghouse D3 steam generator modification, subsequent eddy current testing of steam generator tubes and other routine maintenance required by the length of the

operating cycle was performed at the plant during the assessment period. Maintenance activities were conducted with evidence of prior planning of work activities and using current approved procedures in a step-by-step controlled manner, and post maintenance testing was accomplished by qualified personnel. Documentation was complete, well maintained, and available. The licensee exhibited technically sound and thorough approaches in resolving technical issues. Maintenance staffing and staff training were adequate. Management displayed interest in day-to-day maintenance problems and decision making was consistently at a level that ensured adequate management review.

Three violations and one deviation were identified during this evaluation period.

- (1) Severity Level IV violation for inadequate procedures which omitted fire extinguishers from surveillances, included annunciator response actions for hydrogen recombiners in a hydrogen analyzer procedure, and allowed the overhaul and testing of reactor trip breakers without written directions or criteria.
- (2) Severity Level V violation for failure to make the Assistant Manager, Maintenance Services, responsible for the calibration and control of measuring and test equipment as required in the quality assurance plan.
- (3) Severity Level V violation for failure to list measuring and test equipment to be controlled and failure to document what equipment was used to perform safety related tests.
- (4) Deviation for failure to include area radiation monitors in the preventative maintenance program.

b. Conclusion

Category: 1

Trend: Same

c. Board Comments

Performance in this area was evaluated as Category 1 during the previous SALP assessment. Licensee management involvement in this area was aggressive. No decrease in licensee or NRC attention in this area is recommended.

#### 4. Surveillance

##### a. Analysis

During this evaluation period, inspections were conducted by the resident and regional inspection staffs. Training was generally adequate to perform required surveillances in that approved procedures were followed, results met the acceptance criteria and systems were restored to normal at the completion of activities with few personnel errors. Staffing was adequate such that surveillances were conducted within the proper time frame by qualified personnel; however, the violations resulted from the lack of adequate procedures for conducting required surveillances. Corrective action for identified problems was taken but was not always effective as indicated by occasional repetition. The slave relay continuity testing program, as discussed in the operations section, fire extinguisher surveillance discrepancies identified in violation (1) of the maintenance section, and violation (2) of the fire protection section are examples of ineffective corrective action.

The performance of reactor physics surveillance testing was inspected for the following activities: incore/excore detector calibration; target axial flux difference; core power distribution; core reactivity balance; and thermal power measurement. The first four activities were the responsibility of the reactor performance engineers. Performance on these activities was excellent over the course of the SALP period. The fifth activity was the responsibility of the operations department. Their performance was satisfactory over the course of the SALP assessment period.

The snubber surveillance program was examined and a review of the snubber surveillance procedures disclosed a potential problem regarding the adequacy of the methods used for functional testing of snubbers. Observation of snubber surveillance activities disclosed that the procedures were followed and the training of personnel was adequate. Records documenting snubber surveillance activities were generally complete and well maintained. However, review of the quality records disclosed a potential problem regarding the adequacy of the engineering evaluations performed on inoperable snubbers. These issues were under NRC review at the close of the SALP assessment period.

Four violations were identified during this evaluation period reflecting inadequate procedures.

- (1) Severity Level IV violation for failure to monitor the position of numerous fire doors every 24 hours.

- (2) Severity Level IV violation for failure to monitor the cumulative time that the six-inch purge supply and exhaust isolation valves had been open.
- (3) Severity Level IV violation for failure to perform surveillance testing on numerous valves.
- (4) Severity Level IV violation for failure to conduct slave relay continuity testing.

b. Conclusion

Category: 2

Trend: Improved

c. Board Comments

Performance in this area was evaluated as Category 2 during the previous SALP assessment. Licensee resources in this area appeared to be adequate. No decrease in licensee or NRC attention in this area is recommended.

5. Fire Protection

a. Analysis

During this assessment period, inspections were conducted in this area by the resident inspection staff. The implementation of the fire protection program was reviewed and found to meet NRC guidelines and requirements, with the exception of the violations described below. In late 1983, a new fire protection coordinator was hired and became very much involved in assuring that the fire protection program was adequately maintained. Maintenance of the fixed fire protection equipment appeared to be satisfactory. The staffing, organization, and training of the fire brigade were well defined and implemented. Training requirements for other fire protection related groups such as fire watches and fire protection specialists were not well defined, although these groups were receiving some form of training. The licensee was in the process of developing specific training guidelines for these positions. Reporting of licensee identified problems and discrepancies appeared to be acceptable.

As a whole, management demonstrated a supportive role in the implementation of an effective fire prevention and protection program. Corporate management was frequently involved in site activities and had frequent contact with regional fire protection specialists regarding the fire prevention and protection program. The approach to resolutions of NRC fire protection issues exhibited an understanding of the issues involved. Generally,



sound and viable resolutions were provided in a timely manner. Performance in this area has improved during this assessment period.

Two violations were identified in this area.

- (1) Severity Level IV violation for failure to implement procedures resulting in an inadvertent safety injection, failure to post burn permits at the work site, and supervision not signing burn permits to indicate satisfactory inspection of the work area.
- (2) Severity Level IV violation for failure to implement procedures controlling fire extinguisher checks, transient combustible materials storage, and precautions during welding operations.

b. Conclusion

Category: 2

Trend: Improved

c. Board Comments

Performance in this area was evaluated as Category 3 during the previous SALP assessment. The rating for this period was based on a limited amount of NRC inspection effort. Licensee management attention in this area was concerned with safety. No decrease in licensee attention in this area is recommended.

6. Emergency Preparedness

a. Analysis

During the assessment period, inspections were performed by the regional and resident inspection staffs. These included observation of a full-scale and small-scale exercise and two inspections addressing emergency responses and related implementing procedures.

Routine inspections and exercise observation disclosed no significant problems in the emergency preparedness organization and staffing. An adequately staffed corporate emergency response planning organization provided support to the plant. Key positions in the corporate and plant emergency response planning organizations were filled. Corporate management appeared to be committed to maintaining effective emergency response programs and was directly involved in the annual exercises and the followup critiques. The licensee has been responsive to NRC initiatives on emergency preparedness issues.

Personnel assigned to the emergency organizations 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 procedures. Individuals 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 classification; notification and communications; public information; shift staffing and augmentation; emergency preparedness training; dose projection and assessment; emergency worker protection; post accident measurements and instrumentation; changes to the emergency preparedness program; and annual quality assurance audits of the plant and corporate emergency planning program. The exercises demonstrated that the plan and procedures could be effectively implemented by the licensee's staff although several areas for improvement were noted by the NRC and the licensee.

Two violations were identified regarding the licensee's failure to implement Technical Specifications. These violations are not indicative of a breakdown in the licensee's overall emergency preparedness program.

- (1) Severity Level IV violation for failure to implement the emergency plan procedure which requires the "Control Room" to initiate designated notifications and equipment restoration when an identified occurrence degrades (or potentially degrades) the capabilities of the Early Warning Siren System (EWSS).
- (2) Severity Level V violation for failure to establish adequate procedures to control required surveillance testing of the EWSS.

b. Conclusions

Category: 1

Trend: Same

c. Board Comments

Performance in this area during the previous SALP assessment was Category 1. Licensee resources were effectively used such that a high level of performance was achieved. No decrease in licensee or NRC attention in this area is recommended.

## 7. Security and Safeguards

### a. Analysis

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

Corporate and site security and site management's support and security awareness were very positive. For example, the licensee initiated a security program upgrade to improve their closed circuit television system, intrusion detection and access control system, and incorporate a new computer system. Also, their responsiveness to NRC concerns was demonstrated by promptly modifying a vital area barrier when concern was expressed over equipment located near the barrier. There was a good working relationship between security and other plant personnel. The contract security guard force was adequately staffed to meet the licensee's security and contingency plan commitments. Reviews of records, observations, and interviews of security force personnel indicated that an innovative and effective security training program had been implemented. Security personnel displayed high morale and motivation.

The licensee provided prompt and effective corrective action for all technical issues raised during security inspections.

One violation was identified:

Severity Level IV violation for failure to search packages not sealed in the manufacturing process prior to entry into the protected area.

### b. Conclusion

Category: 1

Trend: Same

### c. Board Comments

Performance in this area during the previous SALP assessment was Category 2. Licensee management attention in this area was oriented toward an aggressive security program. No decrease in licensee or NRC attention in this area is recommended.

## 8. Refueling

### a. Analysis

Removal of existing fuel racks from the spent fuel pool, in preparation for installation of new high density racks, was the  
b

only refueling activity that occurred during this evaluation period.

b. Conclusion

Category: Not Rated

Trend: Not Determined

c. Board Comments

Performance in this area was not rated during previous SALP assessment. There was insufficient inspection activity in this area to justify a rating or to determine a performance trend.

9. Licensing Activities

a. Analysis

There was evidence of planning and assignment of priorities. Decision making seemed to be at a level that ensures appropriate management review. In particular, management involvement and control was evident in the submittals related to the rerack of the spent fuel pool.

The licensee has an understanding of technical issues and has a generally sound and thorough approach to resolving those issues. Their approach to technical issues related to inadequate core cooling instrumentation was an example of this; however, at times the conservatism in the resolution of technical issues was not readily apparent, because some submittals lack the detail and/or data that would fully support their statements. The licensee was responsive once a concern was expressed regarding their submittal.

Responses were provided in a generally timely manner. These responses usually included acceptable resolutions. The licensee was very responsive to NRC concerns in the area of the spent fuel pool rerack.

b. Conclusion

Category: 2

Trend: Same

c. Board Comments

Performance in this area during the previous SALP assessment was Category 2. This area appeared to be receiving proper management attention.

## 10. Quality Assurance Program

### a. Analysis

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

The licensee established a three tier system for plant activity assessments. Type I surveillances were used to perform indepth observations of a single activity. Type II surveillances confirmed the acceptability of one or more quality systems or elements over a time period. The third tier involved review of type II surveillances by a certified lead auditor to assure that all Quality Assurance (QA) program auditing requirements were complete.

Audits were generally complete and thorough. In some instances the QA organization could not obtain a timely response from the audited organization on all aspects of reported problems. Late in the assessment period, licensee management recognized problems in this area. Significant review and revision to QA procedures involving the corrective action system were initiated.

Quality Assurance personnel were well trained and knowledgeable in QA practices and procedures. Quality Assurance records were well maintained, complete, and available for review. Record storage facilities were adequate. Other records (procurement, design control, etc.) were also properly maintained, complete, and available for review. Procurement activities, warehousing activities, and vendor auditing actions were well controlled.

Licensee responsiveness to NRC issues was evident by the corrective action taken on previously identified inspection items.

Corporate QA personnel were actively involved in site activities. There were frequent communications and site visits by the corporate QA staff.

Two violations were identified during the assessment period involving timely corrective actions for identified problems. These problems involved late audit reports [violation (1)] and responses to QA audit findings by the audited organizations that were late or incomplete [violation (2)]. Each of these problems delayed effective corrective action.

- (1) Severity Level IV violation for failure to issue audits within the prescribed time limits.
- (2) Severity Level IV violation for failure of audited organizations to respond to audit findings and provide corrective action dates for audit findings.

## b. Conclusion

Category: 2

Trend: Same

## c. Board Comments

Performance in this area was not rated during the previous SALP assessment period. As a result of an NRC inspection subsequent to the end of the assessment period, increased licensee management attention was applied to the resolution of identified problems. Licensee resources in this area were reasonably effective such that satisfactory performance was achieved. No decrease in licensee management or NRC attention in this area is recommended.

## B. Supporting Data

## 1. Reports Data

## a. Licensee Event Reports (LERs)

During the assessment period, there were 152 LERs reported. The distribution of these events by cause, as determined by the NRC staff, was as follows:

<u>Cause</u>	<u># LERs</u>
Component Failure	58
Design	18
Construction, Fabrication, or Installation	6
Personnel	
- operating activity	19
- maintenance activity	16
- test/calibration activity	19
- other activity	3
Out of Calibration	9
Other	4

Approximately 38 percent of the events were attributable to component failures, 38 percent to personnel associated errors, 12 percent to design errors, and 6 percent to out-of-calibration equipment. This percent of personnel error related LERs is higher than that historically reported by licensees for operating plants. The categorization of errors as personnel related was made by the

NRC staff independently of any licensee assigned cause. Additionally, revised reporting requirements were imposed by NRC on all licensees beginning January 1, 1984. These factors make inappropriate any comparison between this level of personnel errors and previously identified "typical" levels.

b. Part 21 Reports

None

2. Investigation and Allegation Review

There were no allegations or investigations during this period.

3. Enforcement Actions

a. Violations and Deviations

Severity Level I - None  
 Severity Level II - None  
 Severity Level III - None  
 Severity Level IV - 25  
 Severity Level V - 5  
 Deviations - 1

b. Civil Penalties

None

c. Orders

Confirmatory Order issued June 15, 1984, concerning NUREG 0737, Supplement 1 milestones.

d. Administrative Actions

None

4. Management Conferences

June 7, 1983 - Enforcement conference to discuss violations of failure to inform operations personnel, violations of plant operational limits and violations of safety-related administrative requirements.

September 16, 1983 - Management meeting to discuss the load rejection event of September 12, 1983.