SALP BOARD REPORT

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

50-373/85001; 50-374/85001
Inspection Report Nos.

Commonwealth Edison Company
Name of licensee

LaSalle County Nuclear Power Station
Name of Facility

May 1, 1984 through September 30, 1985
Assessment Period

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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.

A NRC SALP Board, composed of staff members listed below, met on December 3, 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 LaSalle County Nuclear Power Station for the period May 1, 1984 through September 30, 1985.

SALP Board for LaSalle County Nuclear Power Station

Name	Title
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M. J. Jordan	Senior Resident Inspector
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K. R. Ridgway	Reactor Inspector
N. C. Choules	Reactor Inspector
T. E. Taylor	Reactor Inspector
G. L. Pirtle	Safeguards Inspector
M. J. Oestmann	Senior radiation Specialist

II. CRITERIA

The licensee performance is assessed in selected functional areas depending whether the facility is in a construction, preoperational or operating phase. Each functional area normally represents areas significant to nuclear safety and the environment, and 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 in assessing each functional area.

1. Management involvement in assuring quality

2. Approach to resolution of technical issues from a safety standpoint

3. Responsiveness to NRC initiatives

4. Enforcement history

5. Reporting and analysis of reportable events

6. Staffing (including management)

7. 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 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 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 so that minimally satisfactory performance with respect to operational safety or construction is being achieved.

Trend: The SALP Board has also categorized the performance trend in each functional area rated over the course of the SALP assessment period. The categorization describes 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

Overall, the licensee's performance, although acceptable, declined during this SALP assessment period. This decline appears to be indicative of weaknesses within the management controls at the site. Although the licensee has actively pursued the development of a Regulatory Performance Improvement Program, it has not been implemented in a manner which resulted in improved performance.

It is evident that strong measures are needed to improve the regulatory performance at the LaSalle facility.

Functional Area	Rating Last Period	Rating This Period	Trend Within This SALP Period
Plant Operations	3	3	Mixed
Radiological Controls	2	2	Declining
Maintenance/Modifications	2	3	Declining
Surveillance and Inservice Testing	2	3	Declining
Fire Protection/Housekeeping	2	1	Not discernible
Emergency Preparedness	2	2	Same
Security	2	2	Same
Refueling	1	*	*
Quality Programs and Administrative Controls	2	3	Same
Licensing Activities	2	2	Same
Startup Testing (Unit 2)	2	1	NA

*No refueling outage during SALP period.

IV. PERFORMANCE ANALYSIS

A. Plant Operations

1. Analysis

This functional area was under continuous review by the resident inspectors during the assessment period. One special inspection was conducted, with a continuous 52 hour control room inspection effort, and two regional based inspections were also conducted. As a result of these inspections, ten violations were identified.

a. Severity Level IV - Failure to close the Drywell Purge System valves within the 24 hour Action Statement of the Technical Specification (373/84023-01; 374/84030-02).

b. Severity Level IV - Failure to follow administrative procedures for proper shift and relief turnovers and proper log entries (373/84023-02; 374/84030-03).

c. Severity Level IV - Failure of the operators to respond to an off-normal condition concerning safety relief valve lifting and two annunciators indicating a problem with ventilation system (373/84023-04A, 04B; 374/84030-05A, 05B).

d. Severity Level IV - Failure to follow the Action Statement of the Technical Specification while having both trains of the Reactor Water Cleanup System bypassed (374/84023-01).

e. Severity Level III - Four examples of failure to control operating activities and ensure safe operation of the facility resulting in the Standby Gas Treatment System being inoperable (373/84028-01; 374/84036-01).

f. Severity Level IV - Failure to follow procedures resulting in room temperature controllers for safety-related equipment not being set correctly and the improper settings not being included in the operator rounds (374/85013-04).

g. Severity Level IV - Failure to prevent six inadvertent Engineered Safety Feature (ESF) actuations (374/85017-04).

h. Severity Level IV - Failure to have an adequate procedure which resulted in the isolation of the Residual Heat Removal, Reactor Building Closed Cooling Water and Primary Containment Ventilation systems due to an inadequate equipment outage sheet. (374/85021-02A, 02B).

i. Severity Level IV - Failure to have a procedure for swapping two control rod drive pumps resulting in a manual scram due to accumulator alarms in the control room (373/85019-03)

j. Severity Level IV - Failure to follow procedures when taking a control rod drive hydraulic control unit out of service (373/85027-02; 374/85028-02)

During the first part of the assessment period, control room personnel continued to have difficulty in identifying the status of sensitive equipment, a problem previously noted in SALP 4, resulting in several management and enforcement conferences (items a, c and d). The continued inability to properly identify equipment status resulted in the Level III violation for having an inoperable Standby Gas Treatment System (Item e) and a civil penalty of $25,000.

In response to the SALP 4 report utility management took aggressive action to make the Licensed Operators in the control room aware of their responsibility for compliance with Technical Specifications. Programs to assist control room personnel in meeting the Action Statement requirements of the Technical Specifications were also implemented. The number of personnel allowed in the control room was restricted. The ROs' response to alarms on the units became more timely and tracking of short term time clock Action Statements for Technical Specification compliance became aggressive. All of the above resulted in an improvement in the professionalism of control room operations. Management's aggressive approach to control room problems was then redirected to other site problems (see maintenance), and as a result, the professionalism of control room operations started to decline. Examples of this were six unnecessary ESF actuations in the middle of 1985 (item g) and late in the assessment period three additional unnecessary ESF actuations (items h and i), one of which was a scram due to operation's personnel not being sufficiently aggressive. Management's corrective actions after the SBGT event were not sufficiently reenforced such that late in the assessment period, the licensee's lack of tracking short term duration time clock Action Statements and the adequacy of log entries were again brought to the attention of the licensee by the Resident Inspectors.

Responses to specific violations were technically sound, viable, and generally thorough. However, as noted above, the licensee had trouble maintaining the level of performance brought about by the corrective actions. The initial responses were acceptable in most cases.

Response of the operating staff to actual events was considered very good. This was best illustrated by the operator's actions in bringing the one operating unit to a cold shutdown condition when, due to a ruptured expansion joint, the service water building flooded. The shift's response and overall communications were excellent.

A special Task Force evaluation of site performance was conducted from July 22 through September 20, 1985. The problems identified in the operations area by the Task Force were:

- The shift routinely operates with several Limiting Conditions for Operation time clocks running at any given time, and with a large number of Technical Specification abnormal conditions which are not significant enough in themselves to cause entry into a Limiting Condition for Operation time clock.

- Prioritization of Control Work requests was needed to reduce the number of work requests in the control room.

- A large number of outstanding procedure changes existed in the operations department.

There were 157 reportable events during the assessment period attributed to the operations area which is an order of magnitude greater than the 17 such events reported in the previous SALP period. This is significant even considering that Unit 2 was not operating in the previous period. Many of the reports were due to isolations of the Reactor Water Cleanup System and spurious initiations of the Control Room Ventilation. These ESF actuations had been reduced towards the end of the assessment period. However, an aggressive approach to this problem early in the assessment period could have prevented many of these reportable events. In addition, the licensee has not determined a final resolution of these two problems. Eighteen events were the result of personnel error, twenty-seven events were attributed to design, manufacturing or construction problems, one event was due to external causes, and six events were the result of inadequate procedures. The number of events indicates less than aggressive action in providing solutions to problem areas.

During the period, the licensee experienced 32 unscheduled reactor scrams (18 on Unit 1 and 14 on Unit 2). Ten of the scrams occurred while the reactors were in shutdown with all rods fully inserted. Seven of the scrams resulted directly from personnel errors. Four scrams were due to defective procedures with the remainder of the scrams attributed to component failures. The number of scrams is considered excessive.

During the reporting period, examinations were administered to 10 reactor operator and 11 senior reactor operator candidates. There were no reapplications and the overall pass rate was 90% which is above the national average. Requalification examinations were not administered by the NRC at LaSalle during this period.

2. Conclusion

The licensee is rated Category 3 in this area based primarily on the number and nature of the violations and on the licensee's inability to sustain a higher level of performance. The licensee was performing at a Category 3 level early in the assessment period and midway through the period had raised this level of performance. They then began declining in performance which continued through the end of the period.

3. Board Recommendations

The Board recommends a continued high level of NRC and Licensee management attention in this area.

B. Radiological Controls

1. Analysis

Nine inspections were performed during this assessment period by regional specialists. The inspections included radwaste and transportation management, operational radiation protection, confirmatory measurements, and environmental monitoring. The resident inspectors also inspected the licensee's activities in this area for programmatic implementation and procedural compliance. The following ten violations were identified:

a. Severity Level IV - Radioactive liquid release made with monitor alarm/trip setpoint less conservative than required by technical specifications (373/84031-03; 374/84038-03).

b. Severity Level IV - Failure to adhere to radiation control procedures concerning location of personal dosimeters on body, personnel frisking techniques, and SOP frisking requirement (373/85014-01A, 01B, 01C; 374/85014-01A, 01B, 01C).

c. Severity Level IV - Failure to secure radioactive material in an unrestricted area (onsite dump) from unauthorized removal (373/85025-02; 374/85026-02).

d. Severity Level IV - Failure to evaluate airborne radioactivity concentrations during an offgas filter replacement incident (373/85025-03; 374/85026-03).

e. Severity Level V - Failure to perform technical specification required weekly gamma isotopic analysis on each milk sample (373/85003-04; 374/85003-04).

f. Severity Level V - Failure to include a technical specification required table of distances and directions of sampling locations to the plant and maps of all sample locations (373/85003-05; 374/85003-05).

g. Severity Level IV - Failure of guard force to be alert to prevent entrance into a high radiation area (373/84014-01; 374/84018-01).

h. Severity Level IV - Failure to update the computer access code to the charcoal absorber vault; a high radiation area (374/84022-01).

i. Severity Level V - Failure to follow procedure to post an access point to a contaminated area (373/84026-02).

j. Severity Level IV - Failure to control access to a high radiation area (373/84026-01).

These violations were indicative of licensee inattention to procedural details, and of weaknesses in correction of identified high radiation area control problems. No overexposures or intakes which exceeded regulatory requirements occurred.

Eleven reportable events were identified during the assessment period. Nine of these events were the direct result of personnel error, primarily leaving high radiation areas unsecured. About two thirds of the way through this assessment period, the licensee was informed that it was not necessary to report unsecured high radiation areas as LERs; no further reports were made. By the close of the assessment period, the high radiation area control problem had diminished, but had not been eliminated.

Licensee staffing has generally improved during this assessment period; however, staff inexperience remains a weakness. This was evidenced by the staff's inadequate response to the offgas filter changeout problem discussed later in this report. Recent actions taken to strengthen staffing include promoting the lead health physicist to the Radiation Protection Manager (RPM), transferring an experienced radiation protection supervisor to assist the RPM, and hiring experienced contract staff and technicians for the first refueling outage. The number of professional health physics personnel has been relatively unstable; two of the four experienced health physicists left CECo during this assessment period.

The licensee implements adequate training and retraining of Rad-Chem Technicians and other plant workers. This training has been augmented during this assessment period by additional retraining for workers who violate radiological controls. The retraining appears to have made a positive contribution to workers' performance, increasing awareness of radiological controls and procedural adherence. Informal supervisory training of workers in radiological control matters was recently initiated as part of the licensees RAD/CHEM Improvement program in response to NRC identified weaknesses in workers' implementation of the radiological control program. Insufficient time has elapsed to assess effectiveness of the supervisory training.

Station management involvement during the major part of this assessment period was weak. Strong corrective actions were not taken to correct inspector and self-identified radiation protection problems concerning procedural adherence, contamination control, and inspector identified weaknesses. Also, a need for improved management of the environmental program is indicated by the increased number of violations. During the latter part of the period, improvements in management attention were made. Evidence of these improvements were noted by increased attention to, and followup of, Radiological Occurrence Reports and personnel contamination events; more disciplinary actions for persons violating procedures; purchasing and installation of portal monitors, frisker booths and monitoring equipment; increased management attention to, and correction of, inspector concerns and identified weaknesses; and providing more physical space to the Radiation Protection Department to increase operating efficiency.

The licensee's responsiveness to NRC initiatives was weak during the first part of the assessment period, with an indication of significant improvement near the end of the period. Weaknesses concerning identified high radiation area and procedural adherence violations went partially uncorrected during a major portion of this assessment period. In response to NRC concerns near the end of this assessment period, the licensee initiated a Radiation/Chemistry Improvement Plan designed to address identified radiation protection program weaknesses. The proposed program, which appears responsive to NRC concerns, includes supervisory improvements in addition to specific improvements in staffing, high radiation door controls, personal and area contamination controls, procedural adherence, monitoring equipment, unconditional releases, and communications between departments.

Several of the Radiological Environmental Monitoring Program (REMP) problems which had been identified during the previous SALP period had not been completely resolved. Licensee responsiveness to these issues improved considerably following a special inspection in April 1985 with the licensee corporate group having REMP management responsibility. The corporate environmental

groups were restructured to place more emphasis on REMP management, and representatives of this group met with Region III staff at the regional office to address specific concerns relating to the LaSalle REMP. The licensee has been generally responsive to both NRC and internally identified problems in the radwaste area as evidenced by relocation of the liquid radwaste effluent monitor to an onsite location, modification to change the source of control rod drive cooling water to minimize primary coolant conductivity anomalies, and a commitment to evaluate the significance of particulate activity collected on charcoal absorbers in gaseous effluent streams.

The licensee's approach to resolution of radiological technical issues has been generally adequate. One exception was the handling of a radiological incident concerning the release of noble gas daughter products and the subsequent contamination of personnel associated with an offgas filter changeout. NRC inspections identified problems concerning contamination controls, procedural adherence, radioactive materials controls, and availability of friskers, frisker booths, and portal monitoring systems. The licensee has initiated actions to correct these problems.

Support for the ALARA Program is adequate; however, increased management support for the reclamation phase of the contamination control program is desirable. Also, strong management actions are needed to take preventive measures to prevent area contamination. Self-identified high radiation area violations continue to exist, and it appears management actions to prevent recurrence have not been totally effective. Improvement in these areas is needed to support the program improvements made in the latter part of this assessment period. Total worker dose during this assessment period was about 250 person-rems in 1984 (the first full year of commercial operation of Unit 1; Unit 2 became operational near the end of the year) and is estimated to be approximately 650 person-rems for 1985. These cumulative doses are well below the average for U.S. boiling water reactors, but not atypical for new plants. The increase in exposure for 1985 is due to an extended Unit 1 Maintenance/Surveillance outage and the contribution from a full year's operation of Unit 2.

The licensee's radiological effluents are below average for U.S. boiling water reactors, but not atypical for new plants. Effluent records were generally complete, well maintained and available. A below ground pipe break was identified and isolated during this assessment period. It resulted in soil and ground water contamination and a minor unplanned release of activity to the cooling lake and subsequently to the river.

Licensee laboratory performance was generally satisfactory during the period. Facilities, equipment staffing, and procedures were satisfactory. Although no evidence of significantly weak performance was noted, the licensee's policy of rotating technicians between chemistry and health

physics, with resulting long intervals between laboratory assignments, could require strong management oversight to avoid performance problems. The licensee does a satisfactory job of reviewing gamma analysis results and quality control of instruments and chemicals appeared adequate. The licensee also performed well in confirmatory measurements comparisons with the regional laboratory, achieving 20 agreements in 20 comparisons. Difficulty was encountered in obtaining a gas sample for comparison owing to poor vacuum at the Unit 2 pretreatment panel. This was an intermittent problem identified several months previously, but it had been regarded as a low priority item by the licensee, and it was not yet corrected. In response to inspector comments, the licensee agreed to correct the problem within two months to facilitate sampling.

The licensee has satisfactorily implemented the solid radwaste requirements of 10 CFR Part 61 and 10 CFR Part 20.311. The licensee has established an adequate QA/QC program to assure compliance with waste classification and has properly completed the necessary information on the manifests accompanying radwaste shipments. The licensee has yet to complete development of a new computer program designed to prompt the user in all aspects of shipments; work is in progress.

2. Conclusion

The licensee is rated Category 2 in this area. The overall performance trend for SALP 5 has declined.

3. Board Recommendation

None

C. Maintenance/Modifications

1. Analysis

The resident inspectors routinely inspected the licensee's activities in this area. Nine special inspections, by region based personnel, were also performed in the maintenance area.

Thirteen violations were identified as follows:

a. Severity Level IV - Failure to adequately test the Reactor Water Cleanup System differential flow indicator because after modification, data sheets were not provided by the Architect-Engineer resulting in the calibration procedure being incorrect (373/84003-02; 374/84002-04).

b. Severity Level IV - Failure to issue timely updated procedures or drawings after the modification for the Reactor Core Isolation Cooling System and the Feedwater System (373/84033-02A, 02B; 374/84040-02A; 02B).

c. Severity Level V - Failure to have an adequate procedure for filling and venting an Automatic Depressurization System switch after it was replaced resulting in a scram (373/85009-02).

d. Severity Level IV - Failure to have an adequate procedure resulting in a Group I isolation and Shutdown Cooling System isolating (373/85012-03A, 03B; 374/85012-03A, 03B).

e. Severity Level IV - Failure to have an authorized work request prior to work being performed which resulted in an isolation of the Shutdown Cooling System (373/85012-04; 374/85012-04).

f. Severity Level IV - Failure to follow procedure resulting in the Automatic Depressurization System being returned to service while inoperable (373/85017-04).

g. Severity Level IV - Failure of the Station Nuclear Engineering Manager to issue correct drawings for a modification (373/85017-05).

h. Severity Level III - Nine examples of failure to perform an Environmental Qualifications modification correctly resulting in not having the required number of Emergency Core Cooling Systems operable (373/85023-01; 374/85018-01).

i. Severity Level IV - Failure to incorporate an ECN and subsequent FCRs into permanent drawings resulting in the Unit 2 leak detection monitors not being properly located (374/85025-01).

j. Severity Level IV - Acceptance criteria were not specified in the maintenance procedure for repair of the valve disc bushings (373/84026-03A, 03B; 374/84033-02).

k. Severity Level V - Failure to perform preventive maintenance lubrications as required (373/84032-05; 374/84039-05).

l. Severity Level V - Several examples of failure to follow procedures such as control of lifted leads, CECo temporary system change procedure LAP-240-6, and drawing control procedure LAP-810-5 which requires that drawings which are not to be used for maintenance, operation, design, etc., be stamped with a CAUTION stamp (374/85013-05).

m. Severity Level IV - Lack of records to indicate that a defective safety-related relay was replaced during maintenance activities (373/85013-02; 374/85013-02).

A recurring problem throughout the assessment period was a lack of adherence to prescribed procedures by personnel performing maintenance/modification activities (items e, k and l). Also, failure to have adequate procedures (items a, c, d, f, g, h and j) was a recurring problem. In addition, one of the violations involved failure to update related documents following maintenance/modifications (item h). This area had been addressed in the previous SALP as a weakness. Of particular significance in the area of failure to follow procedures or have adequate procedures was item h, a Severity Level III violation, which resulted in issuance of a Civil Penalty of $125,000.

The lack of early planning and scheduling of the Unit 2 outage in March 1985 for replacement of instrumentation to meet environmental qualifications resulted in extensive delay in the completion of the outage and several of the violations. The failure of the Station Nuclear Engineering Department to issue correct drawings in a prompt manner resulted in one of the violations (item g) and contributed to several other violations because the station was required to review, approve, and issue the work packages while the outage was occurring, thus rushing this work effort for the modification. The licensee's corrective action to the violations listed above were often viable, but in some cases, lacked thoroughness or depth.

A Task Force Evaluation in July and August, 1985, indicated additional problems as follows:

a. There were 543 outstanding modifications of which 270 had been designated as priorities. These priority modifications include 85 modifications as a result of licensing or other commitments made to the NRC. Other than by NRC commitment there appeared to be no clear basis for assigning priorites.

b. Throughout the assessment period, the number of control room work requests remained at approximately 80 per unit. The significance of individual work requests was not of importance; however, the number of outstanding requests significantly impacted the operators' confidence and ability to rely on control room indicators and instrumentation.

c. Procedures were not being issued in a timely manner after completion of a modification.

During the assessment period there were several maintenance personnel errors that resulted in unnecessary scrams or ESF actuations. Examples of these were: while performing work on a wide range level monitor, a mechanic bumped the instrument rack causing a scram, and a mechanic grounding an instrument caused the bypass valves to open and close causing a pressure

spike on the instrument rack and a scram. Another personnel error which did not cause an ESF actuation, but could have caused a problem resulted in air lines to the air start motors on a diesel being connected backwards after maintenance such that the diesel would not start. This error was found by post-maintenance testing and observed by the inspectors at the time.

Forty-two reportable events occurred in this area during the assessment period. Sixteen events were the result of personnel errors, eight were caused by design, manufacturing, or construction problems, one event was due to a defective procedure, and one event was due to a management/Quality Assurance deficiency. The high number of personnel errors was considered excessive and was also addressed by the Task Force Evaluation conducted in July and August.

Throughout the inspection period, communications between the maintenance groups as well as communications with the operation's organization was not good. This was brought to the attention of management several times and was also determined to be a problem by the Task Force. Another recurring problem throughout the assessment period was inadequate testing for operability of equipment after maintenance or modifications. This was the root cause of the Level III violation (item h) listed above as well as the Level III violation in the operations area.

In an attempt to correct these problems the licensee hired a consultant to assist in improving communications and to increase personnel awareness of their responsibilities. As a result of the consultant's findings the need for planning and scheduling of work was developed such that all groups were aware of what actions were needed to support maintenance activities. A planning/scheduling group was organized at the end of the assessment period. The effectiveness of the group could not be evaluated because of the relatively short time of its existence.

2. Conclusion

The licensee is rated Category 3 in this area. This is a reduction from the previous assessment period. The rating is based on the number of violations identified above and the number and significance of Licensee Event Reports, all of which indicate serious problems in the implementation of the maintenance/ modification program. The trend within the period was declining.

3. Board Recommendations

The licensee should increase its management involvement in this area. The licensee should assess procedural discipline in the maintenance area, and strengthen effectiveness.

D. Surveillance and Inservice Testing

1. Analysis

During the assessment period, the resident inspectors routinely inspected this area, concentrating on implementation of procedures. Five additional inspections were conducted by regional based inspectors in the areas of: inservice testing of pumps and valves; surveillance and calibration programs, including their implementation to verify compliance with regulatory requirements; followup on licensee corrective actions taken to reduce excessive temperatures inside the drywell; and the environmental qualification program for safety-related equipment inside the drywell.

As a result of these inspections, thirteen violations were issued as follows:

a. Severity Level V - Failure to take a hydrogen gas sample within the action statement time of the Technical Specifications (373/84003-01).

b. Severity Level V - Failure of a mechanic to test the correct Recirculation Pump trip switch after it was placed in bypass (373/84014-02).

c. Severity Level IV - Failure to have an adequate procedure and failure of personnel to follow procedures resulting in tripping of a Recirculation Pump and two isolations of the reactor building ventilation system (373/84023-03A, 03B; 374/84030-04A, 04B).

d. Severity Level V - Failure to adhere to procedures resulting in the isolation of the Reactor Water Cleanup System and the isolation of the control room emergency ventilation system (374/84037-01A, 01B).

e. Severity Level V - Failure to provide procedures for the performance of a function and calibration test required by Technical Specifications of the high pressure leak detection monitoring switches for the Residual Heat Removal System (373/84033-06A; 374/84040-05A).

f. Severity Level V - Failure to follow procedures resulting in the Shutdown Cooling System isolating and exceeding the hydrostatic test pressure setting thus lifting three ADS valves (373/85009-04A, 04B; 374/85009-03A, 03B).

g. Severity Level IV - Failure to follow procedure on returning an instrument to service causing a pressure spike and a reactor scram. Similar as violation (373/85009-02). See maintenance section (373/85024-02).

h. Severity Level IV - Failure to implement pump vibration testing in accordance with Section XI of the ASME Code or commitments to NRC (373/85016-03; 374/85016-03).

i. Severity Level IV - A significant number of portable tools, gauges, and instruments were found to be improperly controlled (373/84032-01; 374/84039-01).

j. Severity Level IV - Failure to establish adequate measures to indicate the operating status of structures, systems and components in that yellow caution tags were left on containment monitoring system control room recorders indicating that alarm setpoints were set at setpoints which were found to be different from the actual field setpoints. These caution tags were attached to these recorders from September 1984, to August 1985. (374/85027-02).

k. Severity Level IV - Inadequate or lack of documented procedures to administer the drywell temperature monitoring program; to evaluate and review the data collected; and to take corrective actions when temperatures exceed Technical Specification limits. Additionally, documented surveillance procedures to detect potential sources of increased sensible heat loads inside the drywell were not available (373/85026-03; 374/85027-03).

l. Severity Level IV - Lack of prompt corrective action to review and evaluate recalculated containment monitoring alarm setpoints to assure that the qualified life of safety-related components was not degraded (373/85026-04; 374/85027-04).

m. Severity Level IV - Failure to comply with Technical Specification Section 3.7.7 in that special reports related to drywell temperatures were not submitted in a timely manner to the NRC (373/85026-01; 374/85027-01).

A continuing problem in the performance of surveillances was the lack of procedural adherence resulting in several ESF actuations (items b, c, d and f). Also, the failure to have an appropriate procedure for performing work was a continuing problem (items c, h, j, and k).

These violations also contained examples of untimely engineering evaluation of data relating to safety-related components, and failure to fully meet commitments made to the NRC. Specifically, the licensee did not ensure through a temperature monitoring surveillance program and actual operating observations that safety-related cables and components will not be subjected to temperatures in excess of their environmental qualification threshold temperatures as required by equipment qualification limits and the Technical Specification requirements.

As a result of the NRC findings relating to the excessive drywell temperatures, on September 3, 1985, the licensee committed that a more comprehensive corrective action program will be initiated to closely monitor the excessive temperatures in the Unit 1 and Unit 2 drywells. Subsequent to the SALP period, a management meeting was held on October 1, 1985 to further discuss this issue and the licensee did provide sufficient evaluation and documentation to prove the operability of the equipment in the drywell.

Procedure deficiencies were also identified in the inservice testing program, and there was little evidence of program planning or assignment of priorities. Administrative procedures did not address all of the Section XI requirements and were not well defined early enough to establish and assure a desired quality level for the inservice testing program. Documentation associated with the program was difficult to retrieve and in some cases unreadable; consequently, test records were not conducive to trending and identification of potential generic problems. As a result, problems which are identified via inservice testing are generally treated as isolated cases.

The examples above identify the need for increased management involvement and awareness of the program.

Another problem was the failure to perform surveillances which were required by Technical Specifications (items a and e). Also once a problem was identified, the licensee was slow to react to prevent it from recurrence. In one case, two consecutive surveillances of the Recirculation Pumps resulted in a tripped Recirculation Pump (items b and c) and a power reduction as a result of a mechanic isolating one switch and then performing surveillance on an unisolated switch. In another case, a monthly surveillance was missed due to the lack of a procedure, even though the lack of the procedure had been identified previously.

Personnel error while performing surveillances was a continuing problem. Examples were: using the wrong volt meter which caused a ground in the Reactor Protective System resulting in a half scram; while performing surveillances, a full scram occurred when the mechanic placed a radio on an instrument rack while performing surveillance on a switch in another instrument rack. The rack being worked on induced a half scram and the radio jarred the other rack causing the other half scram which completed the logic for a full scram. More than once after completing a surveillance, a system was valved back into service too rapidly which caused a perturbation on the instrument rack that then caused a scram. This last example technically could be described as a known design problem because both instrument racks are connected such that a water level perturbation, caused by closing or opening an instrument isolation valve too rapidly, could cause both level switches to trip. However, personnel are aware of the problem and should take precautions when returning the systems to service.

Thirty-four reportable events occurred during the assessment period. Nineteen of these events were attributed to personnel errors, eight events were caused by inadequate procedures, two events were related to design, manufacturing, or construction problems, and one event was attributed to a management/Quality Assurance deficiency. Many of the personnel errors caused unnecessary ESF actuations. Many of the event reports could have been prevented if personnel would have followed procedures or had adequate procedures been issued for performing work.

The planning and scheduling of surveillance testing in the early part of the assessment period was weak, such that the support groups (i.e. Health Physics) who needed to perform surveillance testing were not notified until the day of the test. Some improvement in this area was noted in the latter part of the assessment period.

The NRC recognizes that the LaSalle station has a large number of surveillance tests which are required, and that the majority of these are performed in a timely manner. However, the concern remains that problems are not promptly corrected to prevent their recurrence.

2. Conclusion

The licensee is rated Category 3 in this area. The performance trend is declining.

3. Board Recommendations

The Board recommends NRC and licensee attention be focused on this area.

E. Fire Protection/Housekeeping

1. Analysis

Prior to the licensing of LaSalle Units 1 and 2, each unit's fire protection program was reviewed by the NRC staff for conformance with regulatory requirements, including the applicable portions of 10 CFR 50 Appendix R, and inspections were performed by Region III to verify that the programs had been adequately implemented. As a result of these activities, the NRC concluded that the licensee had adequately implemented an acceptable fire protection program for each unit that would support operation until the first refueling outage provided that certain changes were made prior to initial criticality and prior to exceeding 5 percent power. These changes were verified to have been accomplished by Region III. Prior to startup from each unit's first refueling outage, additional changes are mandated by license conditions.

This functional area was under continuous review by the resident inspectors during the assessment period. One violation was identified as follows:

> Severity Level V - Failure to monitor portable electric heater found in two Diesel Generator rooms (373/84033-04; 374/84040-03).

Six reportable fire protection events occurred during the assessment period, half of which were preventable. One event was caused by personnel error, and two events were due to defective procedures. All the events occurred in 1984 and no reportable event occurred in 1985.

The licensee's plant is well kept and clean. There are very few spots where oil accumulates due to leaking pumps or lubricant from valves, etc. The licensee has undertaken a program to stencil equipment in the plant with names to help in identification of components. This stenciling program includes the doors leading into equipment rooms to assist personnel in assuring they are working on the correct components and proper unit.

2. Conclusion

The licensee is rated Category 1 in this area. However, a broad enough spectrum of inspections was not conducted to determine a trend.

3. Board Recommendations

None.

F. Emergency Preparedness

1. Analysis

Three inspections were conducted during the period to evaluate the following aspects of the licensee's emergency preparedness program: emergency detection and classification; protective action decision-making; emergency notification; emergency communications systems; shift augmentation provisions; emergency preparedness training; independent audits of emergency preparedness; and implementation of changes to the emergency preparedness program. Two inspections were observations of annual exercises, the latest being the first unannounced exercise in the Region.

One violation was identified during these inspections as follows:

> Severity Level V - During the 1985 exercise, the licensee failed to demonstrate that adequate corrective actions had been completed on a weakness identified during the 1984 exercise.

The repeat weakness involved a field monitoring team's unfamiliarity with the operation of certain features of a dedicated vehicle for offsite survey tasks and unfamiliarity regarding what equipment had been stored in this vehicle. The licensee's corrective action had been to conduct additional training on the use of this dedicated vehicle during the annual Radiation Chemistry Technician training program. The corrective action was not effective since not all personnel who could be assigned to offsite monitoring teams had received the training, including those who were assigned to this dedicated vehicle during the 1985 unannounced exercise. The licensee's proposed corrective action is now adequate.

Management involvement and control in assuring quality has generally been adequate. Independent audits of the program were adequate in scope, depth, and frequency. Audit records were complete and well maintained. Auditor followup on corrective actions was thorough and timely. The licensee has improved its use of a formal system for tracking corrective actions on action items identified during emergency drills and NRC inspections. Administrative procedures were adhered to regarding the preparation, review, and distribution of changes to the emergency plan and its implementing procedures. The aforementioned violation resulted from incomplete corrective actions having been taken on an exercise weakness.

Another exercise weakness resulted from the licensee's apparent misunderstanding of the sensitivity of the issue of timely notifications following emergency declarations. During the previous SALP period, the licensee had corrected procedural guidance on the required timeliness of initial notifications to State agencies. However, a subsequent procedure revision reverted to the incorrect guidance. The licensee has again revised the procedure to provide the proper guidance.

The licensee's resolution of technical issues has generally been acceptable. A task force of corporate and station personnel has been established to improve LaSalle's Emergency Action Levels (EALs), including their standardization with the EALs of the licensee's other BWR stations. This approach is sound and comprehensive.

The licensee's responsiveness to NRC concerns needs to be improved. Of the four written responses required during the period, three were received after the due dates. One

extension had also been requested and granted. As evident from the violation and aforementioned multiple revisions needed to clarify procedural guidance on offsite notifications, NRC concerns have not always been resolved by initial corrective actions. Considerable NRC effort has also been made to obtain several refinements in the licensee's emergency response capabilities. The licensee has also identified the following as needing improvement, but improvements were not yet evident: logkeeping in the Control Room; operability of the public address system in the Operational Support Center (OSC); and reducing noise levels in the OSC.

Records of actual emergency plan activations through January 1985 indicated that all situations were properly classified and that several were later appropriately reclassified. The NRC and State of Illinois were initially notified of these emergency declarations in a timely manner. Notification timeliness improved significantly after improvements were made to the dedicated communications equipment used to contact State agencies.

The licensee has maintained a prioritized roster of qualified personnel to fill well-defined, key positions in the emergency organization. However, due to attrition, the staffing of the Environs Director position was reduced to one person for several months before training of additional qualified persons was completed. Semi-annual drills have successfully demonstrated the licensee's capability to augment on-shift personnel in a timely manner.

The licensee's training program contributes to an overall adequate understanding of emergency responsibilities, as evident from walkthroughs and exercise performance, with the notable exceptions being the performance of offsite monitoring teams assigned to the dedicated survey vehicle and logkeeping in the Control Room and OSC. The training department has used procedure change summary memoranda to better inform affected personnel of significant changes to implementing procedures.

2. Conclusion

The licensee is rated Category 2 in this area with no discernible trend.

3. Board Recommendations

None.

G. Security

1. Analysis

Five inspections were conducted by region based physical security inspectors during the assessment period. Three were routine inspections, one was reactive, and the remaining inspection was of a combined reactive and routine nature. Additionally, the resident inspectors conducted routine periodic security inspections of a limited scope during the assessment period.

Four violations were identified during the inspection efforts as follows:

a. Severity Level III - The licensee failed to adequately control security badges/key cards (373/85029-01; 374/85030-01).

b. Severity Level IV - On occasion, required compensatory measures for an alarm system were not implemented (373/85022-01; 374/85024-01).

c. Severity Level V - The licensee failed to properly report an event as required by 10 CFR 73.71(c) (373/85029-02; 374/85030-02).

d. Severity Level IV - The alarm system for some dual purpose doors was not tested at the required interval (373/85022-02; 374/85024-02).

A Confirmatory Action Letter was issued on August 29, 1985, to confirm licensee commitments regarding the Severity Level III violation cited above. Also, a civil penalty has been issued for this violation.

This represents a significant reduction of violations as compared to the 12 violations noted in the previous SALP period. The four violations occurred within the last three months of the 17-month assessment period.

The nature of the violations noted during this assessment period are attributed to security management, rather than security force performance or equipment reliability. The violations pertaining to failure to test certain dual purpose doors, and the failure to implement required compensatory measures were attributed to a lack of adequate procedural guidance. Additionally, a concern was noted by NRC pertaining to written guidance which appeared to potentially conflict with 10 CFR 19.15 and 10 CFR 19.16. This issue was resolved by the licensee's

corrective actions. Security section management involvement in assuring section quality performance has declined during the last three months of this assessment period.

The licensee's responsiveness to NRC concerns has been generally adequate once security management achieved the appropriate perspective of the issue. Security management's initial perspective of the misaligned equipment events in February 1985 was one of an operations problem with little or no need for increased security support. The event involving inadequate controls for security badges was not considered significant enough to formally report to the NRC as required by 10 CFR 73.71(c). Concerns pertaining to written guidance and proposed contract specifications which potentially conflicted with 10 CFR 19.15 and 10 CFR 19.16 were initially opposed by security management. This lack of consistent recognition of the significance of security events is a weakness of the security management staff. Once the appropriate perception differences are resolved, the security section staff responds in an aggressive and effective manner to resolve the issues.

Security management closely monitors inspection findings and initiates action on all matters, including concerns and observations. Compensatory measures for computer outages were voluntarily doubled and measures to compensate for alarm system failures were considerably strengthened.

Security section objectives have been clearly defined and address weaknesses noted in past inspection and SALP reports. Security management implemented a program to significantly increase management visibility with the contract security force. Liaison with the contract security force appears effective.

The only unresolved security issue pertains to the adequacy of a barrier for certain equipment within the lake screenhouse. NRC is evaluating the issue.

With the exception of one event, the licensee has generally reported security events in a timely manner and with adequate information to allow analysis to be performed. Resolution of problems have generally been technically sound. Ten security events have been reported during the assessment period. Eight of the security events were equipment related (seven security computer related). The remaining two security events were caused by personnel error. The total number of events is not considered excessive.

Maintenance support for security equipment has generally been excellent. Most maintenance requests were completed within two or three days after initiation. Unplanned security computer outages have been a recurrent problem, but the licensee's corrective actions in August 1985 appear to have corrected the

situation. The licensee completed a preventive maintenance program to renovate all closed circuit television system monitors during this assessment period. One inspection identified a concern on the recent false alarm rate for certain sectors of an alarm system. This concern will be monitored during the next assessment period.

Staffing levels for the uniformed security force appeared adequate. Overtime is controlled. The contract security force training staff was increased from three to five personnel during the assessment period. This and strong shift supervision appears to have eliminated errors due to inattentiveness cited in the previous SALP report. A new contract security force site coordinator was assigned in September 1985. The coordinator has several years of nuclear security experience at the site and should prove to be an asset to the program.

Training effectiveness and qualification of the security force has continued to be adequate. Innovative training methods such as laser weapon training exercises and stress combat training were initiated during the assessment period. The NRC evaluated the former program and considered the exercises to be of great value to the security force.

Day-to-day shift supervision of the security force appeared strong and is the primary strength of the LaSalle security program. No violations or unresolved items noted during the assessment period were attributed to poor performance of the security force.

The corporate security department has provided excellent support to the site security operations. A corporate level Assistant Nuclear Security Administrator (ANSA) position has been filled to provide more effective liaison between the site and corporate security departments. The ANSA closely monitors inspection results and security licensing issues pertaining to the site. During the misaligned equipment events in February 1985, the corporate security department provided extensive manpower resources and investigative expertise. The results of the licensee's investigation in this matter were reviewed by the NRC and determined to be adequate. The scope of such support needs to continue on a routine basis. Close liaison exists between the site, corporate security department, and NRC Region III. Licensing matters are completed in a timely manner.

Senior management support of security operations was evident. Examples of such support include: the security computer system was extensively upgraded during the assessment period; part of a warehouse facility was renovated and turned over to the security department for administrative and training purposes

(this security facility is the largest of its kind for the licensee's sites); and an alternate alarm monitoring system has been installed and is being tested.

In summary, the security section's management effectiveness has been adequate except for the latter quarter of the assessment period. This trend warrants senior site and corporate management support. The security management staff's perception of the significance of security events and issues also warrants attention. Major areas such as the contract security force performance, corporate security support, maintenance support, and senior site management support has been strong and consistent.

2. Conclusion

The licensee is rated Category 2 in this area. This is the same rating noted during the previous SALP period. The performance trend is the same.

3. Board Recommendations

None

H. Refueling

1. Analysis

No licensee activity occurred in this area during the assessment period and thus is not rated.

2. Conclusion

None

3. Board Recommendations

None.

I. Quality Programs and Administrative Controls

1. Analysis

This functional area covers reviews of the Quality Assurance and Quality Control programs as well as an assessment of general administrative controls to assure that activities are performed properly and in accordance with regulatory requirements. During this period, four inspections by region based personnel were conducted in the QA area. The inspections reviewed the licensee's activities relative to auditing and surveillance of startup testing, audits, design changes and modifications, calibration, surveillance and maintenance, activities and qualifications of the offsite reviews and investigative function, and procurement program.

The general assessment of administrative controls was made through routine inspections by resident and region based inspectors in several functional areas and also by a special Task Force which reviewed LaSalle operations.

Two violations were identified in the QA area:

a. Severity Level IV - Failure of the licensee to recognize an increasing trend of deficiency reports in the calibration area (373/84-32-03; 374/84-39-03).

b. Severity Level V - Failure of the licensee's QA Department to perform a technical specification required annual audit from October 1983 through CY 1984 (373/85003-06; 374/85003-06).

These violations were indicative of licensee inattention to programmatic and procedural details.

The inspection of the procurement area identified six unresolved items which related to a programmatic weakness for the potential procurement, installation, and use of unqualified items. The licensee's proposed actions relating to these unresolved items appeared to mitigate some of the weaknesses.

During this assessment period the licensee hired a contractor to evaluate and to improve its management and operations. There is some evidence that this effort was at least partially responsible for improving operations midway through the assessment period. The licensee also reorganized in early 1985 and plant staffing appeared to be sufficient.

However, throughout the assessment period, many examples were identified where the licensee failed to ensure that permanent corrective actions were implemented to resolve problems and prevent their recurrence. This weakness was noted in most of the functional areas and resulted in the violation being issued in the Emergency Preparedness area. For example, administrative controls were not sufficient to prevent the site from having repetitive problems in the modification program involving design control, installation practices, and post maintenance testing. As discussed in the maintenance section, there were the nine examples of failure to perform an Environmental Qualifications Modification correctly which resulted in a Severity Level III violation.

Findings of the special Task Force which conducted an evaluation of LaSalle in mid 1985, also identified concerns with repeated equipment problems with certain plant systems, and an apparent overall problem of controlling work activities. In the first area vent stack monitor failures were due to equipment problems which have not been solved, and most of the failures of the control room ventilation system ammonia/chloride detectors also

have been due to equipment problems, but little progress has been made in solving them. In the area of lack of control over work activities, six items occurred in 1985 that related to problems with the modification/installation program, as set forth below. (These items were included in the nine examples of problems which were compositely identified as a Severity Level III violation, item h in Section IV.C.1).

1) Four RHR shutdown cooling pump high suction flow switches on Unit 1 were piped backwards because the drawings used for installation were incorrect. The drawings had been identified in 1982 as needing correction, but the changes were never made;

2) Division I and Division II RHR area differential temperature isolation sensors on Unit 2 were found to be inoperable since original construction. The error which caused this was discovered during construction of Unit 1 and was supposed to be corrected for Unit 2. The correction was not made;

3) For a period of five days all three divisions of ECCS on Unit 2 were inoperable. The cause was inadequate control/coordination of work groups.

4) A Unit 2 high reactor water level switch for RCIC was found to trip much lower than required. The cause was failure to perform a post-installation calibration of the switch even though the modification package was signed off as complete.

5) A control relay for the Reactor Building Closed Cooling Water Containment isolation valve failed because the wrong relays were installed in the control circuitry. A design change had earlier revised the control power to these relays necessitating a change in the relays. This was not done.

6) During a surveillance test, the Unit 2 RPS sub-channel A failed to trip as required. The licensee determined that the associated terminal block was not wired according to the drawings and wrote a work request to change it. After further problems it was determined that the original installation was correct, but that the drawings were incorrect.

There was poor prior planning of modification activities at the site, and this resulted in several of the violations in the area of maintenance. Early in the assessment period policies and responsibilities of individuals were poorly stated and poorly understood. This caused several personnel errors in various functional areas. Upon identification of this problem, the licensee took corrective action, and late in the assessment period,

management held meetings with the staff to stress the importance of individuals to understand policy and their responsibilities.

The Task Force also identified that administrative controls were not effective in preventing an excessive backlog of procedure changes or an excessive number of outstanding control room work requests, nor was there a system for effective prioritization of modifications.

In summary, adequate quality programs have been established and are staffed by qualified personnel; however, there are numerous problems in the implementation of these programs and establishing well defined administrative controls to resolve the problems. Overall management effectiveness on the implementation and monitoring of programs is weak.

2. Conclusion

The licensee is rated Category 3 in this area and there is no discernible trend.

3. Board Recommendations

NRC and licensee attention should be focused in this area.

J. Licensing Activities

1. Analysis

a. Methodology

This performance assessment is based on our evaluation of the licensee's performance in support of licensing actions which had a significant level of activity during the evaluation period. These actions included the licensee request for license amendments, responses to generic letters, and various submittals of information for multi-plant and NUREG-0737 actions. Active actions during this period are classified below. A total of 29 licensing actions were completed by the NRC:

(1) 31 Plant-specific Actions submitted by licensee (16 completed by the NRC). Included in this category and which were used to provide input to this evaluation are:

- Use of ASME Code Case N-389
- Raise Capacity of Electrical Heaters in Standby Gas Treatment System
- Non-applicability of Specification 3.0.4 to Specification 3.6.3
- Control Rod Position Indication

- Minimum Critical Power Ratio Versus τ
- Response Time for Main Steam Line Low Pressure Trip
- Acceptance Criteria for Firecode CT Gypsum Fire Stops
- Reactor Scram on Low CRD Pump Discharge Pressure
- Repositioning of MSIVs Upon Reset of Isolation Signal
- Change Main Steam Tunnel Differential Temperature Isolation Setpoints
- RWCU Pump Room High Ambient and High Differential Temperature Isolation
- Fire Damper Surveillance Program
- Deletion of Channel Check Requirements
- Change Unit 1 Technical Specifications to Reflect Unit 2 Technical Specifications
- Waiver of 18 Month Surveillance Interval
- RCIC Pump Room Differential Temperature Isolation

(2) 19 Multi-plant Action submitted by licensee (11 completed by the NRC). Included in this category and which were used to provide for this evaluation are:

- GL 83-28 Items 3.1.3 and 3.2.3 - Post-Maintenance Testing
- GL 83-28 Items 3.1.1 and 3.1.2 - Post-Maintenance Testing Verification (RTS Components)
- GL 83-28 Items 3.2.1 and 3.2.2 - Post-Maintenance Testing Verification (All Other SR Components)
- GL 83-28 Item 4.5.1 - RTS Reliability
- GL 83-28 Item 1.1 - Post-Trip Review
- GL 83-28 Item 1.2 - Post-Trip Review Data and Information Capability
- GL 83-43 Technical Specification Affected by 10 CFR 50.72 and 50.73
- GL 83-36 Change Action Statement for Accident Monitoring Instrumentation
- Implementation of NUREG-0313, Revision 1
- Control of Heavy Loads
- Extension of Equipment Qualification Implementation Date - 10 CFR 50.49(g)

(3) 5 TMI (NUREG-0737) Actions submitted by licensee (2 completed by the NRC). Included in this category and which were used for this evaluation are:

- Safety Parameter Display System I.D.2
- Relief and Safety Valve Testing II.D.1

b. Management Involvement and Control in Assuring Quality

There is evidence of planning and assignment of priorities an decision-making seems to be at a level that ensures adequate management review. Management within CECo was accessible which facilitated the reviews. The typical area where

management involvement and control was evident was in meeting the requirements for extension of the date for equipment qualification. Effective communication between the licensee and NRC is good. One area where management attention could be increased is in the screening of amendment requests to assure that they provide sufficient discussion of the safety consequences and/or reason for the proposed changes.

c. Approach to Resolution of Technical Issues from a Safety Standpoint

In general, the licensee has a good understanding of the technical and safety issues and the proposed resolutions have been conservative and sound. However, in submittals for Technical Specification changes, sometimes sufficient information is not provided in the discussion of the safety consequences and the reason for the change. As a result, some time and effort is required in order to arrive at an acceptable resolution.

d. Responsiveness to NRC Initiatives

The licensee has provided timely responses which are usually sound. CECo has been aware of and sensitive to the needs of the staff to perform its review function. The licensee is always ready to meet with the staff when such a meeting would assist in resolving issues. On one of the occasions where the licensee was proposing using the fine motion control rod drive in a demonstration test, CECo on its own initiative, met with the staff to review their proposed submittal to assure that the submittal would be completely responsive to the staff's position prior to transmitting it to the NRC.

e. Staffing

The licensee has competent managers with nuclear experience. Most of the managers have worked up through the organization and therefore acquired nuclear background.

f. Recommendations

The licensee's management should maintain a high level of involvement in the functional area of licensing to assure improvement in its performance in this area, conduct audit reviews by screening some of the proposed license amendments prior to submittal to assure that sufficient information has been provided for the proposed amendments, and should strengthen its involvement in Q/A areas to rectify the problems that have occurred in replacing qualified equipment.

2. Conclusion

The licensee is rated Category 2 in this area and the performance trend is the same.

3. Board Recommendations

None.

K. Startup Testing (Unit 2)

1. Analysis

During the assessment period, Unit 2 completed its initial startup testing program. For Unit 2, the scope of the inspection program was reduced since the administrative program was the same as that used for Unit 1 and the test procedures were based on Unit 1 procedures, (with the addition of lessons learned from Unit 1). Inspection activities during the assessment period consisted of indepth reviews of startup test result evaluations, witnessing of startup test procedures, observations of corrective actions for problems identified, and independent inspection effort. Portions of three inspections by resident inspectors were devoted to this area. Two inspections were conducted by region inspectors. As a result of these inspections, one violation was identified as follows:

> Severity Level V - Failure to receive an approved change to a procedure prior to performing a startup test (374/84034-01).

The above violation is the only one identified during the Unit 2 startup test program and is therefore considered to be an isolated case. The root cause was a failure of attention to detail by the test engineers and the involved plant management.

The aggressive management attention to incorporating the lessons learned from the Unit 1 into the Unit 2 startup assisted greatly in the rapid progression of the startup program. From time of receiving the 5 percent power license until completion of the startup test program was 278 days. This shortened time frame is indicative of good management attention.

The licensee's assignment of an aggressive management team to complete the startup program was also effective in that they planned and scheduled the testing evolution well so that all personnel involved with the program knew well in advance when and what was needed to support a test. This allowed for the test to run smoothly and the data to be taken as needed. The support of the entire station was directed to the accomplishing of this goal. All station groups seem to work well towards completing the Unit 2 startup.

2. Conclusion

The licensee is rated Category 1 in this area. Since startup testing is a one-time function there is no trending involved.

3. Board Recommendations

None.

V. SUPPORTING DATA AND SUMMARIES

A. Licensee Activities

Unit 2 completed its initial startup testing program early in the assessment period. Throughout most of SALP 5, Units 1 and 2 engaged in routine power operation. A major scheduled Unit 1 outage for the 18 month Technical Specification surveillance requirements and EQ replacement began on September 29, 1984 and was completed on November 24, 1984. A major scheduled Unit 2 outage for maintenance, 18 month Technical Specification surveillance requirements, and EQ replacement began on February 28, 1985 and was completed on July 20, 1985.

The remaining outages throughout the period are summarized below:

Unit 1

May 31 to June 2, 1984	Repair blown SJAE seals
June 24 to June 25, 1984	Repair reactor water level control logic
January 5 to January 6, 1985	Repair generator field ground
February 2 to February 3, 1985	Repair high steam tunnel temperature sensors
February 8 to February 10, 1985	Repair feedpump intakes
March 3 to March 5, 1985	Offsite fault on a transmission line
March 21 to April 7, 1985	Repair valving error on EQ modification
April 11 to April 13, 1985	Repair turbine bearing No. 11
May 31 to June 10, 1985	Flooding of lake screen house
June 17 to June 18, 1985	Repair EHC system
June 20, 1985	Replace oil trip solenoid on turbine
June 29 to June 30, 1985	Adjust CRD flow control
July 12 to July 27, 1985	Repair suppression pool spray valve

Unit 2

May 3 to May 6, 1984	Perform minor maintenance work
May 12, 1984	Turbine maintenance
May 21 to May 25, 1984	Repair main transformer
May 27, 1984	Repair No. 3 bypass valve
June 15 to June 16, 1984	Repair HPCS relief valve
June 16 to June 17, 1984	Repair condensate booster system
July 9 to July 10, 1984	Repair turbine/generator intercept valve
July 28 to August 1, 1984	Repair steam leaks on moisture separator reheater
August 17 to August 29, 1984	Repair main generator exciter
October 27 to October 28, 1984	Repair recirculation flow control logic
November 12, 1984	Stop valve maintenance work
November 20 to November 22, 1984	Bypass valve maintenance work
December 14 to December 19, 1984	Perform maintenance on turbine supervisory instrument cabinet
August 1 to August 3, 1985	Investigate high drywell temperatures

Unit 1 scrammed fourteen times (two occurred while shutdown) and Unit 2 scrammed eighteen times (eight occurred while shutdown). Seven of the Unit 1 scrams and six of the Unit 2 scrams were attributed to equipment malfunctions and required minor maintenance prior to returning the units to service. Two scrams occurred at power for Unit 1 which were attributable to personnel error. Five scrams occurred at power for Unit 2 which were attributable to personnel error. While both units were shutdown, two scrams were attributed to personnel error. Four scrams during SALP 5 were due to defective procedures.

B. Inspection Activities

On July 22, 1985, Region III formed a special task force to perform an in-depth review of the operating history of LaSalle County Station with emphasis on identifying potential problem areas from trends that may exist. The task force consisted of two

resident inspectors, two regional inspectors and the chief of the Technical Support Staff. In addition, a Senior Resident Inspector from another facility performed a more in-depth review of selected areas initially identified by the review team. The methodology used to perform the review was two part: (1) to review a variety of hard data concerning operational history, and hardware problems (including assessment of root causes and other contributing factors) for potential trends and (2) to assess NRC perceptions of LaSalle County Station via interviews with regional personnel and to ascertain if potential problem areas existed that were not identified during the hard data review. The task force subsequently completed its review on September 20, 1985, and determined that:

(1) Certain plant systems experience problems including equipment failures and/or isolations on a regular basis.

(2) Problems are evident in the implementation of the modification program.

(3) Control of work activities affecting the plant is inadequate.

(4) Plant operators routinely deal with excessive numbers of work requests, procedure changes; time clock limiting conditions for operation and Technical Specification abnormal conditions.

(5) Plant regulatory performance has historically been poor.

(6) Many of these same problem areas were previously identified by the licensee in an onsite review conducted on July 16, 1982 at the request of the NRC.

Violation data for LaSalle is presented in Table 1, which includes Inspection Reports 84003, and 84013 through 85031 for Unit 1, 84002 and 84017 through 85032 for Unit 2.

TABLE 1

INSPECTION ACTIVITY AND ENFORCEMENT

No. of Violations in Each Severity Level

Functional Areas	Unit 1			Unit 2			Site		
	III	IV	V	III	IV	V	III	IV	V
A. Plant Operations	1	5		1	8		1	9	
B. Radiological Controls		6	3		6	2		7	3
C. Maintenance/ Modifications	1	8	2	1	7	2	1	9	3
D. Surveillance and Inservice Testing		7	4		7	3		8	5
E. Fire Protection			1			1			1
F. Emergency Preparedness			1			1			1
G. Security	1	2	1	1	2	1	1	2	1
H. Refueling									
I. Quality Programs and Administrative Controls		1	1		1	1		1	1
J. Licensing Activities									
K. Startup Testing (Unit 2)						1			1
TOTALS	3	29	13	3	31	12	3	36	16

C. Investigations and Allegations Review

During a safeguards review, followup was made to two anonymous allegations received by the Senior Resident Inspector on April 4, 1985. The allegations concerns: (1) an unsigned security badge that was found during a routine badge review and the fact that an incident report was not made, and (2) the fact that the security supervisor was unbadged for three minutes in the main security access facility while the supervisor's security badge was relaminated. These allegations were substantiated. However, they were not significant and an evaluation determined that no further action by Region III was warranted. No violations of requirements were identified.

D. Escalated Enforcement Actions

1. A Civil Penalty in the amount of $25,000 was issued late in 1984 for a violation involving an inoperable "A" Standby Gas Treatment train.

2. A Civil Penalty in the amount of $125,000 was issued in 1985 for a violation involving Unit 2 being without Emergency Core Cooling System capability for approximately five days.

3. A Civil Penalty in the amount of $37,500 was issued late in 1985 for a violation involving control of security badges.

E. Management Conferences Held During Appraisal Period

1. Confirmatory Action Letter (CAL)

a. A CAL was issued February 20, 1985, to confirm licensee commitments regarding the discovery of a mispositioned valve on the air start system of a Unit 1 Diesel Generator on February 18, 1985 and the mispositioned breaker on a Unit 2 safety bus found on February 19, 1985.

b. A CAL was issued June 17, 1985, to confirm licensee commitments regarding the discovery of improperly installed instrumentation and the resultant loss of automatic actuation of Emergency Core Cooling Systems capability.

c. A CAL was issued July 19, 1985, to confirm licensee commitments regarding the discovery of improperly installed RHR cooling isolation switches on Unit 1.

d. A CAL was issued August 29, 1985, to confirm licensee commitments regarding the loss of the security badge system integrity at LaSalle.

2. Management Conferences

a. September 7, 1984 (Glen Ellyn, Illinois)

Meeting to discuss licensee performance in regards to their Regulatory Performance Improvement Program (RPIP).

b. September 17, 1984 (Glen Ellyn, Illinois)

Management meeting to review Systematic Assessment of Licensee Performance (SALP 4).

c. March 7, 1985 (Glen Ellyn, Illinois)

Meeting to discuss licensee performance in regard to their RPIP.

d. June 24, 1985, (LaSalle County Station)

Meeting to discuss licensee performance in regard to their RPIP.

e. July 16, 1985 (Glen Ellyn, Illinois)

Meeting to discuss additional aspects of the licensee's RPIP.

3. Enforcement Conferences

a. June 22, 1984 (Glen Ellyn, Illinois)

Enforcement conference to discuss circumstances surrounding RWCU isolation functions for temperature differential flow being inoperable and the system was not isolated.

b. September 11, 1984 (Glen Ellyn, Illinois)

Enforcement conference to discuss exceeding LCO during vent and purge valve operations at LaSalle site.

c. December 7, 1984 (Glen Ellyn, Illinois)

Enforcement conference to discuss circumstances surrounding violation of Technical Specification 3.6.5.3 and the continuing problem of control room operators being inattentive.

d. May 28, 1985 (Glen Ellyn, Illinois)

Enforcement conference to discuss circumstances surrounding miswiring of trip system B for ADS which resulted in an LCO being exceeded and continuing personnel errors by maintenance personnel at the site.

e. June 24, 1985 (Glen Ellyn, Illinois)

Enforcement conference with management representatives of CECo to discuss the recent events involving the loss of all Emergency Core Cooling Systems from June 5-10, 1985 at LaSalle.

f. September 17, 1985 (Glen Ellyn, Illinois)

Enforcement conference to discuss the circumstances of the uncontrolled security badges found at the site refuge dump.

F. Review of Licensee Event Reports and 10 CFR 21 Reports

1. Licensee Event Reports (LERs)

LERs issued during the 17 month SALP 5 period are presented below:

Unit 1	Unit 2
LERs No.	LERs No.
84-24 through 84-94	84-17 through 84-93
85-01 through 85-62 and 85-65	85-01 through 85-41

Proximate Cause Code*	Number During SALP 5
Personnel Error A	62
Design Manufacturing Construction Installation B	37
Defective Procedures D	17
Others X	136
TOTAL	252

*Proximate cause is the cause assigned by the licensee according to NUREG-1022, "Licensee Event Report System."

There were 134 LERs issued for Unit 1 and 118 LERs issued for Unit 2 during the SALP period. The LERs submitted during the assessment period provided for the most part a clear description of the cause and nature of the event. However, in late 1984 and early 1985 after some previous discussions with the site personnel, the inspectors identified some errors in LER preparation. Examples of this was as follows:

a. Improper classification of the reporting required and/or cause code.

b. The narrative description was not clear or specific enough to identify what occurred.

c. The corrective action was not specific enough to evaluate if it was sufficient to prevent recurrence of the report.

d. The section identified at "other facilities involved" was filled in with the same facility (unit) as the one in which the event occurred.

e. Incorrect LER number identified as previous occurrences. (IE 373/84... should have been 374/84...).

f. Use of undefined acronyms.

g. Identify previous occurrences sometimes were restricted to only a single unit in lieu of identifying all previous occurrences at the site. (Both units)

h. Improper reference to technical specification section.

For all errors which were not of a minor nature the licensee agreed to revise the LER. However, a closer review prior to issuance of LERs needs to be done in the future. Some of these errors decreased in the latter part of the assessment period; however, periodically they have occurred and need continuous review by the licensee to prevent reoccurrence.

The Event Analysis Branch reviewed LaSalle's LERs and compared them to reports from four other late model BWRs. They determined that LaSalle has more serious events than the other plants. Another point mentioned, was that LaSalle Unit 2 had procedural problems that were not seen at the other BWRs. This reflects, not only on a new plant, but also on a plant with poor management oversight. One would expect that procedural inadequacies would have been identified during Unit 1's first few months of operation. To be seeing procedural problems now suggests that procedures were not getting adequate review or, that the operating staff was not communicating effectively with the technical staff and management. Since Unit 1 had less problems than other similar BWRs, LaSalle's problems as a station appear to be related primarily to one aspect of management, namely, difficulty in controlling, reviewing and checking EQ modifications, and operating procedures.

The Office for Analysis and Evaluation of Operational Data (AEOD) also performed as assessment of the quality of LERs submitted by the licensee during this SALP period. AEOD found these LERs to be of above average quality based on the requirements contained in 10 CFR 50.73. A copy of the AEOD report has been provided to the licensee so that minor deficiencies noted can be corrected on future LERs.

2. 10 CFR 21 Reports

No 10 CFR 21 reports were submitted during the assessment period.

G. Licensing Actions

1. NRR/Licensing Meetings

February 5, 1985	Unbraced Length and Slenderness Ratio
March 25, 1985	Extension of Deadline for Equipment Qualification
May 16, 1985	Fine Motion Control Rod Drive Demonstration

2. NRR Site Visits

September 17, 1980 Salp Meeting and Licensing Activities Review

3. Commission Briefings

None

4. Schedular Extensions Granted

March 29, 1985	Extension to Schedular Requirements of Environmental Qualification of Electrical Equipment

5. Reliefs Granted

None

6. Exemptions Granted

None

7. License Amendments Issued

Unit 1

License Amendment #17	Main Steam Line Temperature Difference Trip Setpoints and Allowable Values
License Amendment #18	Unit 1 Tech Specs to Reflect Changes Incorporated in Unit 2 Tech Specs
License Amendment #19	Modify Limits on Monitors in Accordance with GL 83-36
License Amendment #20	Eliminate the RWCU Pump Room Ambient and Differential Tempurature Monitoring
License Amendment #21	Change Method of Calculating the Kilowatt Capacity for the Electric Heaters in SBTS

License Amendment #22	Delete the channel Check Requirements for Certain Instruments
License Amendment #23	Incorporate the Revised 10 CFR 50.72 and 50.73 Requirements

Unit 2

License Amendment #2	Main Steam Line Temperature Difference Trip Setpoints and Allowable Values
License Amendment #3	Incorporate Reactor Scram on Low CRD Pump Discharge Pressure as Required by License Condition 2.C.(7)
License Amendment #4	Vacate Amendment No. 3 and Reinstate License Condition 2.C.(7)
License Amendment #5	Modify Limits on Monitors in Accordance with GL 83-36
License Amendment #6	Incorporate Reactor Scram on Low CRD Pump Discharge Pressure as Required by License Condition 2.C.(7)
License Amendment #7	Eliminate the RWCU Pump Room Ambient and Differential Temperature Monitoring
License Amendment #8	Extend the Schedular Requirements of License Condition 2.C.(5) for Replacement of Equipment Qualification
License Amendment #9	Change Method of Calculating the Kilowatt Capacity for the Electric Heaters in SGTS
License Amendment #10	Delete the Channel Requirements for Certain Instruments
License Amendment #11	Incorporate the Revised 10 CFR 50.74 and 50.73 Requirements
License Amendment #12	Change the Main Steam Line Low Pressure Instrument Response Time

8. Emergency Technical Specification Granted

July 3, 1985	Emergency	Ammendment No. 2 for Unit 2 and Amendment No. 17 for Unit 1
September 4, 1985	Emergency	Amendment No. 3 for Unit 2

July 1, 1985 Emergency Amendment No. 12 for Unit 2

9. Orders Issued

None

10. NRR/License Management Conference

None