

SALP BOARD REPORT

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

50-373/88001; 50-374/88001
Inspection Report No.

Commonwealth Edison Company
Name of Licensee

LaSalle County Nuclear Power Station-Units 1 & 2
Name of Facility

November 16, 1986 through March 15, 1988
Assessment Period

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I. INTRODUCTION

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

An NRC SALP Board, consisting of the staff members listed below, met on May 4 and May 17, 1988, to review the collection of performance observations and data to assess 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 the LaSalle Station for the period November 16, 1986, through March 15, 1988.

The SALP Board for the LaSalle Station SALP 7 assessment consisted of the following individuals:

| <u>NAME</u> | <u>TITLE</u> |
|------------------|---|
| *C. E. Norelius | SALP Board Chairman, Director of Radiation Safety and Safeguards (DRSS) |
| *H. J. Miller | Director, Division of Reactor Safety (DRS) |
| *E. G. Greenman | Director, Division of Reactor Projects (DRP) |
| M. J. Virgilio | Acting Deputy Director (DRP) |
| *W. L. Forney | DRP, Branch Chief |
| M. J. Jordan | DRS, Section Chief |
| *R. D. Lanksbury | LaSalle Senior Resident Inspector |
| R. A. Kopriva | LaSalle Resident Inspector |
| *L. J. Norrholm | NRR, Acting Project Director III-2 |
| *P. Shemanski | NRR, Project Manager (LaSalle) |
| M. A. Ring | DRP, Section Chief |
| W. L. Axelson | Chief, Technical Support Staff |
| D. E. Jones | DRP Project Inspector |
| L. R. Greger | DRSS, Chief, Facilities Radiation Protection Section |
| A. Dunlop | Technical Support Staff |
| A. B. Davis | Regional Administrator, RIII |
| C. J. Paperiello | Deputy Regional Administrator, RIII |
| M. P. Phillips | DRS, Section Chief |
| B. S. Mallett | DRSS, Section Chief |
| S. D. Eick | DRS, Reactor Inspector |
| J. M. Ulie | DRS, Reactor Inspector |
| J. Clifford | Region III Coordinator, EDO |

*Voting members of the board.

II. CRITERIA

The licensee performance is assessed in selected functional areas, depending on whether the facility is in a construction, preoperational, or operating phase. Each functional area is significant with regard to nuclear safety and the environment and corresponds to a normal programmatic area. Some functional areas may not be assessed because of little or no licensee activities or lack of meaningful observations in that area. Special areas may be added to highlight significant observations.

The following evaluation criteria were used in assessing each functional area:

- management involvement in ensuring quality
- approach to resolution of technical issues from a safety standpoint
- responsiveness to NRC initiatives
- enforcement history
- operational and construction events (including response to, analysis of, and corrective actions for)
- staffing (including management)

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

On the basis of the SALP Board assessment, each functional area evaluated is classified into one of three performance categories. The definitions of these performance categories are given below:

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 and/or construction quality is being achieved.

Category 2: NRC attention should be maintained at normal levels. Licensee management attention and involvement are evident and are concerned with nuclear safety; licensee resources are adequate and are reasonably effective so that satisfactory performance with respect to operational safety and/or construction quality 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 may determine to include an appraisal of the performance trend of a functional area. Normally, this performance trend is only used if both a definite trend of performance is discernible to the Board and the Board believes that continuation of the trend may result in a change of performance level.

The trend, if noted, is defined as:

Improving: Licensee performance was determined to be improving near the close of the assessment period.

Declining: Licensee performance was determined to be declining near the close of the assessment period.

III. SUMMARY OF RESULTS

Overall, the licensee's performance was found to be acceptable. One of the functional areas, Engineering/Technical Support, was not rated during the previous assessment period.

A comparison between the last SALP rating and this one is given below.

| <u>Functional Area</u> | <u>Rating Last Period (SALP 6)</u> | <u>Rating This Period (SALP 7)</u> |
|---|--|--|
| A. Plant Operations | 2 | 2 |
| B. Radiological Controls | 2 | 2 |
| C. Maintenance | 2 | 2 |
| D. Surveillance | 2 | 2 |
| E. Fire Protection | 2 | 2 |
| F. Emergency Preparedness | 2 | 2 |
| G. Security | 2 | 2 |
| H. Outages | 2 | 2 |
| I. Quality Programs and Administrative Controls Affecting Quality | 2 | 2 |
| J. Engineering/Technical Support | *NR | 2 |
| K. Licensing Activities | 2 | 1 |
| L. Training and Qualification Effectiveness | 2 | 2 |

*NR = a new functional area that was not rated during the previous assessment.

IV. PERFORMANCE ANALYSIS

A. Plant Operations

1. Analysis

Evaluation of this functional area was based on the results of routine and special inspections conducted by resident inspectors and regional inspectors.

During the SALP period, the equivalent availability factor for Unit 1 was 55.1% and Unit 2 was 56.9%. Unit 1 underwent a three month forced outage to repair a reactor recirculation pump and was in single-loop operation for a five month period. Unit 2 had a five month scheduled refueling/maintenance outage.

The availability of both units increased during the SALP period. When the outages for the units were over, midway through the SALP period, each unit achieved a record run for continuous operation. Unit 1 ran for 89 days, tying its previous continuous run record, before the unit scrambled. The unit was down for three days and then proceeded to run another 84 days before coming off line for a scheduled outage. Unit 2 ran continuously for 257 days, setting a new record for Commonwealth Edison's boiling-water reactors, before the unit scrambled because of a personnel error. The unit was down for nine days while forced outage work was completed and a review of the power oscillation event and scram was made. The unit was then returned to service. Personnel errors continue to decrease, and the licensee's efforts and programs to mitigate these errors have been effective, resulting in 2.0 percent of all events (a combination of licensee event reports and deviation reports) being attributed to personnel errors by operators.

The enforcement history in this area identified several concerns throughout the SALP period. Of these concerns, there was one Severity Level IV violation. This was a significant improvement over the number of violations reported during SALP 6 (one Severity Level III and ten Severity Level IV violations).

Scram history during this SALP period is indicative of average performance during the first portion of the assessment period, with an improving trend toward the latter part of the period. There were a total of nine automatic reactor scrams with rod motion.

There were three significant events in the latter part of the SALP period on which two Confirmatory Action Letters (CALs) were issued. The first event was through-wall pinhole leaks found in the piping of the minimum flow line from the Unit 1 turbine-driven reactor feed pump to the condenser. Subsequent operations to accommodate repairs resulted in a plant scram. The second event occurred shortly after the first event and again pertained to Unit 1. The first CAL was issued when one of the main steam isolation valves (MSIVs) would not remain closed when specific operator actions had closed the MSIVs. The third event was the reactor core power oscillations and subsequent reactor scram of Unit 2. The second CAL was issued for this event after the SALP period ended. Operations personnel responded well to the immediate concerns of these events.

Management involvement in ensuring quality was considered adequate during an inspection performed at the beginning of the SALP period. A noted weakness became apparent when it was found that the emergency operating procedures (EOPs), particularly the plant-specific technical guidelines, were under informal control. There also was a lack of specific validation criteria for the EOPs. The licensee was responsive to these concerns and took prompt corrective action. Continued management involvement to ensure quality operation was effective, as evidenced by the amount of dual-unit power operation that occurred during SALP 7. The station management holds a weekly meeting to discuss operational events that occur and problems that may lead to an operational event. By management addressing these issues early and bringing them to final resolution, helped to reduce personnel errors. Also these meetings were attended periodically by corporate management to keep informed, and to assist in resolution of site problems. The number of unscheduled scrams, personnel errors, and other reportable events decreased significantly.

The Operations Department staffing remained stable throughout the period. A few department changes did take place to enhance management skills and to expand the knowledge levels of the Operations Department and other departments: an employee from Training and an employee from Quality Assurance exchanged positions with employees from Operations. Several of the operations staff also supplemented the Planning and Scheduling Department. This continuing exchange of knowledge, good interdepartmental communication, and cooperation are reflected in the improved operability of the plant. The licensee continues to maintain a minimum of shift manning as required by technical specifications for the control room. This at times placed a strain on the shift to authorize work and at the same time ensure proper operation of the units.

During SALP 7, 70 licensee event reports (LERs) were issued, of which 19 were the result of personnel errors. Of these 19, only two were attributable to the Operations Department. This is an

improvement over SALP 6. The Office for Analysis and Evaluation of Operational Data (AEOD) noted that the LERs adequately described all the major aspects of the event, including all component or system failures that contributed to the event and the significant corrective actions taken or planned to prevent recurrence. The reports were thorough, detailed, and generally well written and easy to understand.

The control room personnel continue to maintain a very business-like and professional attitude. The control room is generally quiet and work efforts do not interfere with the operation of the units. Access to the control room is controlled and organized. The conduct of operators during routine activities and shift turnover was specifically noted as strong. The Operations Department has maintained a high-quality work ethic in the control room throughout the SALP period. The nuclear station operators (NSOs) responded well to alarms and changing conditions within the plant in accordance with their procedures and the Technical Specifications. They were attentive and cognizant of the different activities (surveillances and maintenance) taking place in the plant.

The licensee was responsive to NRC initiatives during the assessment period. Periodic meetings between the licensee and NRC management have been held to review plant improvement programs and operating performance. The licensee issued monthly performance reports that provided statistical data and trends for parameters covering all aspects of plant operations. The reports tend to be a valuable management tool and generally were the basis for discussions during the meetings.

2. Conclusion

The licensee's performance is rated Category 2 in this area. The licensee's performance was rated Category 2 in this area during the previous assessment period.

3. Board Recommendation

None.

B. Radiological Controls

1. Analysis

This functional area was evaluated on the basis of six routine inspections conducted by regional specialist inspectors and observations by the resident inspectors.

Enforcement history during this assessment period was similar to that of the previous period, with two Severity Level IV and

one Severity Level V violations compared to four Severity Level IV violations during the previous period. One violation involved an inadequate procedure that resulted in the spread of contamination onsite.

Staffing quality appeared to be generally improved. Only minimal turnover was experienced. The ALARA (as low as is reasonably achievable) group was strengthened by the appointment of an experienced operational health physicist as ALARA coordinator and an experienced radiation/chemistry contractor as liaison between radiation protection, construction, and maintenance staffs. The anticipated split of radiation/chemistry technicians (RCTs) into separate radiation protection and chemistry groups has been postponed pending union negotiations. Assignment of the least experienced RCTs to backshift laboratory duty, as a result of job selection based on seniority, remains a weakness because the supervising foremen have only limited familiarity with chemistry instruments and procedures. Although chemists are currently assigned responsibility for specific functional aspects of the chemistry program, the absence of formal backup arrangements, particularly in the absence of unit assignments, is a weakness.

Management involvement in ensuring quality was generally good. Indications of improved station support for the radiological control program included (a) sending radiation protection personnel to a nuclear power plant in Washington State to review work similar to that expected for the LaSalle Unit 1 recirculation pump repair, (b) assignment of a radiation/chemistry contractor as liaison between the Radiation Protection, Construction, and Maintenance Departments to improve mutual understanding and cooperation, and (c) support for the acquisition of better monitoring equipment and contamination control facilities. Corporate involvement in the radiological control program has evolved over the past several years to provide very timely and knowledgeable assistance for generic and specific technical aspects of the program and for the performance of technical audits. A corporate group reviews station implementation of improvements in the chemistry program. An assigned station chemist was diligent in tracking plant operational data in tabular form. However, trend plots of these data prepared by both corporate and station groups are not timely enough to be useful other than for retrospective review on a monthly basis.

Licensee responsiveness to NRC initiatives was generally good during the period. Previously identified NRC concerns have been addressed in that training for stationmen has been upgraded to include radiation protection topics; surveillance requirements for the recently completed radwaste storage facility have been developed; and improvements have been made

in the laboratory quality assurance program, including better use of control charts, use of multipoint calibration curves for chemistry instruments, timely recalibration of a gas-counting geometry, and revision of laboratory procedures. The licensee also is considering reduction in the number of controlled area exit points, improvements to the system for dealing with radiological problems, and decontamination of the radwaste building.

The licensee's approach to the resolution of technical issues has generally been sound and timely, with appropriate consideration of radiological safety. The licensee implemented a program for "hot particle" training, identification, and control. The total station dose for 1987 was 1376 person-rem, which is indicative of acceptable radiological controls. ALARA program initiatives were evident during a major refueling outage and a special outage to remove a recirculation pump. Emphasis on reducing contaminated areas has continued; however, the general decontamination of the radwaste facility is still needed. No unplanned liquid or gaseous releases were reported.

Confirmatory measurement comparisons improved markedly, with 19 agreements in 27 analyses compared with nine agreements in 17 analyses in the previous period. All but two of the disagreements were resolved upon reanalysis. Radiological confirmatory measurements also showed considerable improvement, with 67 agreements in 68 comparisons. The licensee has made considerable improvements in laboratory quality assurance including an interlaboratory comparison program involving company and vendor laboratories. However, despite these and other improvements, some weaknesses still exist in that the licensee has not implemented fully independent control standards for nonradiological analyses; RCT performance testing on chemistry analyses is still not fully implemented, particularly for those assigned to the backshifts; and testing of RCT performance is not correlated with rotation of RCTs into the laboratory.

2. Conclusion

The licensee's performance is rated Category 2 in this area. The licensee's performance was rated Category 2 in this area during the previous assessment period.

3. Board Recommendation

None.

C. Maintenance

1. Analysis

Evaluation of this functional area was based on the results of 14 routine and one special inspections conducted by regional and resident inspectors.

Enforcement history in this area showed improvement in licensee performance since the previous assessment. During this assessment period, two Severity Level IV violations were identified. In the previous assessment period, five violations were identified, of which three were Severity Level IV and two were Severity Level V. Of the two violations identified during this assessment period, both were because of a lack of management controls involving inadequate procedures and failure to follow procedures. Lack of management controls has been addressed in previous SALPs as a weakness and continues to be a recurring problem.

The previous SALP report noted that an in-depth assessment of maintenance activities had been performed by NRC staff. Followup meetings and inspections showed that the licensee had actively pursued the recommendations presented by the NRC. These recommendations included actions to improve support of maintenance activities, such as development of a system to give an accurate account and status of work requests; expansion of the preventive maintenance program; implementation of a task-specific training program; conduct of various information, planning, and briefing meetings; increased supervision in the field; conversion of routinely used work instructions (Figure 9s) into approved procedures; and implementation of the maintenance history program.

Management responsiveness to NRC initiatives and concerns during this SALP period was evident in the attention given to the items addressed in the in-depth maintenance assessment. An inspection in March of 1987 determined that progress was being made in each of these areas. However, NRC singled out the following areas as needing continued management attention and improvement: reducing the backlog of work requests, continued preparation of maintenance procedures and development and implementation of the preventive maintenance program. Early in the SALP period the station had a significant backlog of maintenance work requests. During the period, management continued emphasis on the program and reduced the amount of maintenance items. Although, not at an optimum level, the licensee's program is effective in reducing the amount of maintenance items.

A total of 11 LERs were issued during this assessment period as a result of problems and events attributable to this functional

area. Of these 11 LERs, four were the result of personnel errors. Two of these resulted in engineered-safety-feature actuations, one resulted in a reactor scram (while the unit was shut down), and one resulted in a spill of spent resins.

Operational events attributable to this area indicated weaknesses in the licensee's preventive maintenance program identified by the failures associated with balance-of-plant (BOP) events. Ammonia detector trips, turbine-generator trips, reactor scrams, and BOP equipment out of service because of poor or inappropriate preventive maintenance continue to occur.

Management's involvement in ensuring quality in this functional area was demonstrated by the increased efforts during the maintenance outages that occurred in this SALP period. Management support in preplanning, training, implementation, and post-outage critiques was much improved. Although, there were delays, the Unit 2 refueling maintenance outage scheduler performance was better than previous outages. The Unit 1 reactor recirculation pump repair was a forced outage. Special management staffing and attention were given to that outage, resulting in an outage completed close to the original schedule.

Maintenance records and reports reviewed were generally complete and thorough. Procedures were being improved and were found adequate. However, in one instance several problems arose because procedures were not followed during the maintenance performed on the spent resin pump. Consequently, spent resins were pumped onto the floor of the spent resin pump room.

Staffing in this functional area was sufficient. Inspector observations of maintenance activities determined that the personnel were knowledgeable of the tasks assigned to them. Work was performed in a professional and technically skilled manner.

Communications and intradepartmental interactions had improved. The coordinating of different Maintenance Department work activities on the same piece or pieces of equipment continues to improve, thus reducing the out-of-service time on a particular piece of equipment.

2. Conclusion

The licensee's performance was rated Category 2 in this area. The licensee's performance was rated Category 2 in this area during the previous assessment period.

3. Board Recommendation

Based upon weaknesses indicated by operational events, the SALP Board recommends increased licensee attention to balance-of-plant maintenance.

D. Surveillance

1. Analysis

Evaluation of this functional area was based on the results of 19 routine inspections conducted by regional and resident inspectors. During these inspections the inspectors examined inservice inspections, snubber functional tests, containment integrated leak rate test, routine system operability surveillance, and the licensee responses to Generic Letter 84-11 and Information Notice 86-99.

Enforcement history in this functional area improved. During this assessment period three Severity Level IV violations were issued compared to seven violations issued during the previous SALP period (six Severity Level IV violations and one Severity Level V violation).

One enforcement conference was held pertaining to a drywell instrument pressure switch that had been valved out resulting in a Technical Specification L.C.O. being exceeded. The issue became a Severity Level IV violation. While the proposed corrective actions were adequate, the licensee efforts to implement these actions have not been totally effective.

The licensee issued 30 LERs related to the surveillance functional area. Of these 30 LERs, 11 were personnel errors in which two scrams were incurred. One of these scrams occurred when the reactor was shut down, the other ended a record run for continuous operation for licensee owned BWR's. There were ten Engineering Safety Feature system actuations due to surveillances which is an increase from the previous SALP period at which there were three. The licensee voluntarily submitted five LERs pertaining to Static-O-Ring (SOR) failures. Due to their previous experience with SOR switches, the licensee has committed to provide the NRC with LER's of SOR switch failures.

Missed surveillances continue to occur; but have occurred infrequently. Management involvement regarding this concern has been very evident. Also, a notable improvement of improper verification of equipment status continues. During the last SALP period a problem with valve lineups and second verifications was increasing and appeared as though the licensee had less than adequate control on second verifications. During this SALP period the problem appears to have been largely solved.

In March 1988, a personnel error in valving-in an instrument being surveillance tested resulted in a trip of both reactor recirculation pumps causing reactor core power oscillations, and a resultant reactor scram.

As a result of the event, several issues were identified ranging from personnel error, inadequate procedures, problems with communications, and operator training. These issues are further discussed in other sections of this SALP report.

The licensee response to Generic Letter 84-11, "Inspections of BWR Stainless Steel Piping," and Information Notice 86-99, "Degradation of Steel Containments," generally provided acceptable resolutions to these two (2) issues. The response for both were technically sound and generally thorough. The implementation of the initiatives was within an acceptable timeframe.

Management involvement and control in assuring quality was evident during this SALP period. The surveillance activities received prior planning and the activities were controlled through the use of well stated and defined procedures. Observation of activities indicated that personnel had an adequate understanding of work practices and procedures were followed. The records were complete, well maintained and available. At the completion of this SALP period the licensee has been able to generally correct problems identified with inservice testing which had gone uncorrected in the previous assessment period.

2. Conclusion

The licensee's performance in rated Category 2 in this functional area. During the previous assessment period, the licensee's performance was rated Category 2. Missed surveillances, personnel errors, and ESF actuations continue to be a concern in this functional area.

3. Board Recommendation

None.

E. Fire Protection

1. Analysis

The licensee's performance in the functional area of fire protection was evaluated on the basis of one regionally based inspection to review actions taken by the licensee with regard to allegations concerning the adequacy of training provided to fire brigade members and qualifications of certain personnel responsible for the licensee's fire protection program. During the previous assessment period, an NRC review determined that each allegation was substantiated. The inspection visit during this assessment was to follow up on the licensee's actions to

resolve those issues. General inspections performed by the resident inspectors also were considered; these included observations made during plant tours and observations made by the Project Manager.

During this assessment period, the Project Manager had toured most areas of the plant at least once while participating in inspections. The plant was found to be very clean in all areas observed. The cleaning and painting program implemented during the assessment period produced a notable improvement in the overall appearance of the plant. The housekeeping had been noted to deteriorate during outages which required extensive cleanup to return the unit to a clean condition.

During the allegation inspection visit, plant tours were also conducted that showed the cleanliness of the toured areas was being maintained satisfactorily.

A Severity Level IV violation involving the fire protection area was identified during this assessment period. This violation was related to the plant "Fire Alarm Response" procedure, which did not prescribe the need for fire brigade assistance upon receipt of an alarm in the control room. The licensee disagreed with this violation. Consequently, this issue has been sent to NRC headquarters for further review and disposition. This violation, if upheld, would represent enforcement history that is the same as in the SALP 6 assessment period when one Severity Level IV violation was identified.

Corporate management involvement in ensuring quality in the fire brigade training area has been evident in that a live-fire training building has been built at the Braidwood Station and is now being used by the LaSalle fire brigade staff. Corporate management recommended to all nuclear plant managers that they use this building for training each of the nuclear stations' fire brigades. The approval of the LaSalle Station management to allow the station fire brigade to annually train at this special facility is viewed as a positive change in the licensee's philosophy of fire protection.

The licensee's approach to the resolution of technical issues from a safety standpoint in the fire brigade area is considered viable and generally sound. This was determined by the noted improvement made in the first brigade training area. The resolution of one technical issue remains indeterminate as discussed in the enforcement history paragraph.

The licensee's responsiveness to NRC initiatives and inspector questions during the allegation review was timely.

The licensee's fire protection organization staffing, including fire brigade, fire brigade training department instructors, and station fire marshal office personnel, were all reviewed during the allegation inspection visit. It was determined that the licensee now has staff who meet NRC criteria in these positions.

The licensee's fire brigade training and qualification program has undergone a re-evaluation on a corporate-wide basis. A much improved fire brigade training standard was approved by the licensee during this assessment period. As part of this training standard, a certification guide for fire brigade members and lesson plans for the training instructor have been developed. This standard is considered a positive contribution to the overall adequacy of the fire brigade training program.

2. Conclusion

The licensee's performance is rated Category 2 in this area. The licensee's performance was rated Category 2 in this area during the previous assessment period.

3. Board Recommendation

None.

F. Emergency Preparedness

1. Analysis

Evaluation of this functional area was based on four inspections conducted by regional inspectors, three routine inspections, and an exercise.

Enforcement history was unchanged. One Severity Level IV violation was identified, compared to one Severity Level V violation during the previous period. The violation related to untimely filing of controlled documents at the emergency operations facility. Corrective actions were adequate.

Management involvement in ensuring quality has been good. Several audits and multiple surveillances of the program were thorough and well documented. Periodic drills, communications tests, and supply inventories were completed on schedule and adequately documented. Inventory procedures have been refined to ensure periodic replacements of perishable items. The tracking system was effectively used to track actions on NRC- and licensee-identified items and to ensure that periodic tasks were performed on schedule. Corrective actions were satisfactorily completed on four items from the 1986 exercise. Some improvement was noted compared to the inadequate contamination control and ALARA practices demonstrated during

coolant sample collection and transport in the 1986 exercise. However, two items requiring corrective action were identified during the 1987 exercise.

The licensee's approach to resolution of technical issues from a safety standpoint has been good. The licensee designated multiple onsite assembly areas for nonessential personnel to replace a single location that had evolved into a dry active waste packing and temporary storage area. Onsite personnel were informed of the new assembly areas in a timely and thorough manner. The licensee submitted a new set of emergency action levels (EALs) for NRC review during the previous assessment period; the staff provided comments on the proposed EALs in December 1986. The EALs were resubmitted in February 1988 and adequately addressed those earlier staff concerns. The licensee has agreed to revise the wording of two EALs because of recently raised generic concerns; this action will complete this significant program upgrade.

Through the time of the last inspection, the licensee correctly classified and promptly notified NRC and State officials of all situations that were classifiable emergencies. Internal evaluations of these declarations improved in quality during the assessment period.

Provisions for staffing the onsite emergency organization improved somewhat since the previous assessment period in that callout procedure revisions were consistently issued on time. However, the callout procedure did not list a key position. Additionally, only one individual is currently trained for that position. Although responsible personnel have been aware of this shortage and the trained individual had been unavailable for some time because of an illness, adequate corrective action was not initiated until the inspectors expressed concern. The licensee committed to add the position and to list three qualified personnel for the position to the next procedure revision. A staffing shortage concern involving another position and different initiating circumstances had been similarly raised and resolved during the SALP 5 assessment period.

The emergency preparedness training program was well defined. Annual training requirements, including examinations, have been properly approved and specified for all onsite positions. Personnel training was closely monitored to ensure that it was current. Based on walkthroughs, records review, and overall exercise performance, it was determined that the onsite emergency organization has been adequately trained.

2. Conclusion

The licensee's performance is rated Category 2 and improving in this area. The licensee's performance was rated Category 2 in this area during the previous assessment period.

3. Recommendation

None.

G. Security

1. Analysis

Evaluation of this functional area was based on the results of four security inspections (three routine and one reactive) conducted by regional physical security inspectors, and on the results of the routine activities conducted by the resident inspectors to observe security practices.

The enforcement history in this area has remained the same. Four Severity Level IV violations and one Severity Level V were identified during this assessment period, and five violations were identified during the previous assessment period. The violations represented failures by the licensee to follow its approved security plan and did not represent any major programmatic concerns. Although the security management staff initiated effective and timely corrective actions, the violations clearly should have been identified and corrected prior to identification by the NRC inspectors. Security management staff did not adequately track and analyze methods for identifying violations, security weaknesses, and potential problems. Occasionally, completion dates to which the licensee had committed were not met because of an internal misunderstanding/miscommunication that resulted in items not being completed. There was a lack of proper management overview to ensure that inspection findings were adequately corrected, commitment dates were met, and corrective measures were implemented in a timely fashion.

A new Station Security Administrator (SSA) was appointed in July 1987. Since the management change, the functioning of the security program has improved. The new SSA was very receptive to inspector concerns and observations and has shown an aggressive attitude toward improving security.

Required records and reports were generally complete, well maintained, and available. The licensee generally reported security events in a timely manner. The licensee had one reportable security event during this assessment period that involved the implementation of new safeguards reporting requirements. There were 11 security events reported during the previous assessment period.

Staffing was adequate. Positions within the licensee and contractor security organization were appropriately identified and responsibilities were adequately defined. Liaison among the licensee security organization, other licensee plant organizations, and the contract security organization was adequate.

The contract security force was properly supervised and trained. Procedural guidance was sufficient in detail, and security personnel were knowledgeable of their responsibilities. The security training and qualification program is acceptable and satisfies commitments.

The previous SALP report was critical of the effectiveness of the contract security force; this lack of effectiveness contributed to the identified violations. This issue has been resolved, and the effectiveness of the contract security force has significantly increased. Only one of the five violations identified during this assessment period was attributed to the contract security force.

Maintenance support for security equipment has generally been excellent. Working facilities for the security force are adequate and housekeeping is generally acceptable.

The corporate security department continues to provide excellent support to site security operations. Close liaison exists between the site, the corporate security department, and the NRC Region III.

2. Conclusion

The licensee's performance is rated Category 2 in this area. The licensee's performance was rated Category 2 and declining in this area during the previous assessment period.

3. Board Recommendations

None.

H. Outages

1. Analysis

Evaluation of this functional area was based on the results of inspections conducted by the resident inspectors concerning the review of selected procedures, equipment checkouts, and other activities associated with the Unit 2 refueling outage and the Unit 1 maintenance outage. The Unit 2 outage started January 5 and ended June 16, 1987; the Unit 1 outage started May 28 and ended September 14, 1987.

The enforcement history in this area showed an improvement in licensee performance since the previous assessment period. During this assessment period no violations or deviations were identified; in the previous assessment period two Severity Level IV violations were issued.

Operational events associated with the Unit 2 refueling outage included a 18-day delay in the completion of the outage. This delay was due to a variety of items, including completion of modifications, installation of equipment, and testing. Startup of Unit 2 from the long refueling outage went very smoothly, however, with no personnel errors identified. The Unit 1 maintenance outage benefitted from obvious preplanning because the repair and replacement of the recirculation pumps went smoothly.

Management involvement included monthly site management meetings in preparation for the outages, using lessons learned from previous outages. During the outages, there were daily and weekly scheduling meetings, which resulted in the Unit 1 maintenance outage going smoothly and the Unit 2 first refueling outage having fewer delays than the first refueling outage for Unit 1. Management also held a post-outage lessons-learned meeting to identify problems and assign department head responsibility for resolution.

The licensee's response to NRC initiatives was good. When concerns were identified, corrective actions were taken in a prompt and effective manner.

Staffing to support outages is considered marginal because the number and expertise of personnel on site may not be sufficient to accomplish the outage tasks in the time allotted. This was evidenced by the 18-day extension of the Unit 2 outage and the late development (mid-February 1988) of the planning schedule for the March 1988 outage on Unit 1.

As a result of NRC initiatives, the licensee is continuing to improve outage scheduling and planning. One example of this is the rotation of operating personnel, such as a shift engineer into the outage planning organization.

2. Conclusion

The licensee's performance is rated Category 2 in this area. The licensee's performance was rated Category 2 in this area during the previous assessment period.

3. Board Recommendation

None.

I. Quality Programs and Administrative Controls Affecting Quality

1. Analysis

Evaluation of this area addresses two related, but separate, functions.

First, it includes the assessment of licensee management's activities to achieve quality in overall plant activities. This assessment reflects the quality of licensee activities in the individual functional areas that have been addressed in other sections of this report.

Secondly, it includes the assessment of the licensee's internal, independent quality oversight activities, such as those performed by the quality control/quality assurance organizations.

Evaluation of the independent quality oversight activities consisted of three inspections by regional inspectors and continual observation by the resident inspectors. The areas examined during two inspections included followup of seven findings in the area of procurement and audits previously identified in 1984 and 1987. Quality assurance (QA) auditor qualifications were also reviewed. During the followup inspection, the seven previously identified inspection findings were closed with no safety issues or violations identified.

Overall management involvement in ensuring quality has been good, and management has been aggressive in solving problems. This was evident by the significant reduction in the number of reportable events (19 for the current assessment period of 18 months compared to 26 for the previous assessment period of 13.5 months) and violations (21 for the current assessment period as compared to 34 for the previous assessment period) resulting from personnel error. These improvements were the result of site management aggressively identifying problems and pursuing resolutions that involved the plant workers so that they became part of the solutions. An example of this is clearly demonstrated by the elimination of the problem with redundant verifications, which was a concern in the latter part of the last assessment period. The establishment of a site team made up of personnel from the different departments (operations, mechanical maintenance, instrument and control, and technical staff) has helped prevent the problem from recurring. Management involvement in improving plant performance also can be recognized in the plant painting program to improve housekeeping and plant appearance.

Management involvement was evident in the procurement area as indicated by improved procedures for the control of procurement. Also, management involvement was evident in the audit area as indicated by the timely revision of the audit schedule to ensure

that all functional areas of maintenance would be properly audited. Management revised the schedule after the potential for not auditing all functional areas was identified by an inspector.

The responsiveness to NRC initiatives also was good. This can be seen in the continuation of the error-free startup program that was originated in the latter part of the previous assessment period. This program has resulted in the site and corporate management becoming aware of problems at the site early and resolving them to prevent recurrence. This program also presented a good opportunity for the site worker to bring up work problems with site and corporate management so that his/her job would be made easier. This program has helped to reduce the number of personnel errors. Responsiveness to NRC initiatives was considered complete enough that the requirements of a 10 CFR 50.54(f) letter issued to LaSalle in November 1985 were rescinded.

The approach used by the licensee to resolve issues was generally conservative and technically sound. This was evident in the resolution of six inspection items related to procurement. Procedures in the procurement area were revised to improve methods for purchasing and dedicating those materials and parts designated as commercial grade.

However, resolution of the problem with the air-operated valves on the main steam isolation valves yielded mixed views from the inspectors with regard to the licensee's approach to technical issues. Following considerable NRC involvement, the licensee prevented the restart of Unit 1 until it was satisfied that a sufficient testing program had been established to identify any safety problems with the valves. The daily planning meetings and "Error-free weekly meetings" helped site personnel to identify technical issues early and bring them to a safe conclusion. However, there was an event late in the assessment period in which core power oscillations occurred following a trip involving two recirculation pumps. The licensee sought assistance from General Electric to assess the oscillations; however, efforts to inform the NRC of the details of the power oscillations were considered marginal. The issue is further discussed in the Engineering/Technical Support functional area.

Quality of the site staffing was satisfactory. The licensee had established a program to move staff personnel with expertise from one department to another to help in the overall improved performance of the site. Examples of this are the movement of a Shift Engineer into the position as head of the Training Department and the head of the Training Department into an Operation Engineer position. Thus both training and operations

get a different perspective. The Planning Department also gets new people on rotation from the Operations Department to assist in planning work, thereby preventing the scheduling of too much work at one time or the scheduling of work that would conflict with Technical Specifications based on the condition of the plant and other systems currently out of service. Thus the quality of the staffing was adequate. However, with the planned reduction in refueling outage time from 20 weeks to 15 weeks, the NRC is concerned that site staffing may not be sufficient to accomplish the workload. This situation manifested itself somewhat with the outage in the early part of the assessment period that was extended 18 days beyond the scheduled date. Also, the planning schedule for the outage in March 1988 was not issued until mid-February 1988; 1 month before the outage. In addition, the maintenance staff may not be sufficient in size, in that, although the number of outstanding work requests had shown a continuous decrease during the assessment period, the total number of work requests still outstanding needs to be reduced. In the area of control room operators, the staffing is the minimum to meet Technical Specifications.

2. Conclusion

The licensee's performance is rated Category 2 in this area. The licensee's performance was rated Category 2 in this area during the previous assessment period.

3. Board Recommendation

None.

J. Engineering/Technical Support

1. Analysis

This is a new functional area and consequently was not rated in previous SALPs. Evaluation of this functional area was based on the results of several inspections conducted by regional inspectors and the resident inspectors, as well as input from an AIT conducted just after the assessment period. Areas examined included licensee actions to address the program for monitoring high drywell temperature, the failure to implement surveillances on electrical circuit breakers as required by Technical Specifications, environmental qualification of plant equipment, mitigation systems for anticipated transients without scram (ATWS), inoperability of ASCO solenoid valves for main steam isolation valves (MSIVs), a licensee-identified anomaly with cable jackets in the standby liquid control system, feedwater recirculation line erosion/corrosion, engineering support for outages, and the power oscillations in the reactor core resulting from a trip involving two recirculation pumps.

Enforcement history in this area was acceptable although two Severity Level IV violations were issued in this area. One was for failure to implement a technical specification required surveillance since the equipment had been installed in 1982. The equipment had not been specifically identified in any procedure, even though it was specifically identified in the Technical Specifications. The other one was for failure to conduct a required 50.59 review for a modification to the drywell ventilation system. While engineering and technical issues related to the core power oscillations at LaSalle Unit 2 on March 9, 1988, are discussed in this SALP report, any potential enforcement actions on these issues are still under review and consequently are not included in this SALP.

Management involvement in ensuring quality of engineering items was mixed. One example of poor involvement was evidenced by the lack of management attention given to the high drywell temperature monitoring program. Similarly, the above violation concerning the lack of a 50.59 review reflected a lack of management involvement to assure quality because management knew of the modification but had not assured themselves that a 50.59 review had been accomplished. On the other hand, management involvement was evidenced by their commitment to determine root cause and to properly implement appropriate corrective actions to resolve identified engineering problems. This was demonstrated by the work effort that went into identifying the root cause and corrective action of wall thinning in a feedwater minimum flow line. This root cause identification resulted in an information notice being issued to warn the industry of a potential problem with valve design which could cause wall thinning in steel pipe. However, improvement could be made in controlling and organizing records addressing inspections and preventive maintenances associated with safety-related electrical components.

The licensee's approach to resolving technical issues was mixed. On the positive side, during an audit one concern was identified for not maintaining a thermocouple in a qualified condition. The licensee was able to demonstrate, through a well-developed engineering analysis, that the thermocouple was operable and that there was no concern from a safety standpoint. A similar quality evaluation regarding the RHR termination kits also determined that the equipment was qualified, although the life expectancy of the material was reduced from 40 years to approximately 23 years. In addition, the licensee identified cables feeding the standby liquid control squib valves contained blisters. A sample of the cable was sent to the laboratory for analysis, and appropriate corrective actions were implemented on the basis of the results. With regard to the resolution of the problem with the ASCO solenoid valves that operate the MSIVs, the licensee's approach to the

technical issues was mixed. In accordance with a CAL issued by Region III, the licensee agreed to prevent the restart of Unit 1 until a sufficient testing program had been established to identify any safety problems with the valves. The licensee also conducted a detailed investigation and analysis to determine the correct course of action. However, initial licensee efforts to determine the root cause of the problem failed to detect the sticky substance, which was identified by an NRC inspector, on the solenoid valve internals. Subsequent efforts; however, were thorough and complete. The licensee, of their own accord, extended the testing and inspection criteria to Unit 2.

With regard to the core power oscillations of March 9, 1988, the licensee's approach to resolution of technical issues appeared to be somewhat indifferent to the potential safety significance of the event and inadequate in providing appropriate procedural guidance and training to operators for exiting the unstable region which was resulting in oscillations. Recommendations from the reactor vendor in this area had not been incorporated into the operating procedures. The licensee's reporting of the event was insensitive to the NRC's prompt need for pertinent information, in that, the details of the oscillations which were communicated to the reactor vendor were not communicated in the initial notification to the NRC and a followup notification was not made.

The technical support for modifications conducted during outages improved. During the outage in the first part of the assessment period the engineering support was not completed for some of the modifications until after the outage began. This placed additional workload on site personnel during the outage to adequately review the modification, and prepare the required paper work to get the modification installed, tested and operational. An improvement was noted during the outage at the end of the assessment period, in that, engineering packages supporting the modifications were complete prior to the start of the outage.

Responsiveness to NRC initiatives was timely and adequate. In this regard, the licensee's activities related to the core power oscillations event, including shutdown of the plant and effective dialogue with the staff, were excellent. Similarly, the licensee's actions on commitments resulting from safety evaluation reports and technical evaluation reports were found to be timely, generally sound, and acceptable. Proposed resolutions to equipment qualification (EQ) issues were adequate.

Staffing was generally adequate. Key positions were identified and responsibilities were defined. EQ personnel were knowledgeable of technical and regulatory requirements. Adequate engineering support was provided from the corporate engineering office when needed.

2. Conclusions

The licensee's performance is rated Category 2 in this area. Because this is a new area, no rating is available for the previous assessment period.

3. Board Recommendations

None.

K. Licensing Activities

1. Analysis

This evaluation represents the integrated inputs of the licensing project manager (LPM) and the technical review groups that expended a significant amount of effort on LaSalle licensing actions during the rating period.

The basis of this appraisal was the licensee's performance in support of licensing actions that were either completed or had a significant level of activity during the rating period. These actions consisted of amendment requests, responses to generic letters, TMI items, and other actions, including the following specific items:

- ATWS (Generic Letter 83-28 and 10 CFR 50.62)
- Inservice Testing Program
- Detailed Control Room Design Review
- High-Density Fuel Rack Modification
- LaSalle Units 1 and 2 Reload TS Changes
- Static-O-Ring Failure Analysis
- Security Plan Amendments
- Snubber One-Time TS Change
- Storage of Fuel in Either Pool TS Change
- Ammonia Detector Removal
- Fire Protection Review
- Regulatory Guide 1.97 Review
- MSIV Group 1 Isolation TS Change
- Shutdown Cooling Isolation Valve Breaker TS Change
- Jet Pump Flow Drive TS Change
- Traversing Incore Probe TS Change
- LER Rule TS Change
- Stainless Steel Inspection Plan
- Disposal of Low Level Sludge Review
- Water Level Instrumentation Review
- Diesel Generator One-Time TS Change
- Uncoupled Control Rod TS Change
- Fine Motion Control Rod TS Change
- Suppression Pool Water Level Alarm TS Change
- Main Steam Tunnel Temperature TS Change

- Refuel Interval TS Surveillance Change
- Inservice Inspection Program Rev. 1 Review
- Refuel Interval One-Time TS Change

Corporate management involvement ensured that the submittals needed to support the licensing activities of both units were timely, thorough, and technically sound. The quality of the licensee's reviews and responses to NRC concerns was kept at a high level and, during these activities, there was evidence of prior planning and assignment of priorities. Corporate management was involved in site activities and maintained close contact with the NRC staff to ensure that these activities were tracked and problems were satisfactorily resolved in a timely manner. Licensing records were complete, well maintained, and available for review.

Licensing and engineering support staffing is adequate, and vacancies have been filled with qualified individuals. The regulatory assurance position established at the plant has been effective in the implementation of licensing requirements on a timely basis. In general, the licensing and engineering staffs are competent and usually provide technically sound and timely responses to NRC requests. The effectiveness of the staff has been demonstrated by the fact that currently there is no backlog of overdue licensing actions.

In most instances, the effective dialogue between the licensing and engineering staffs has resulted in prompt and technically sound responses to NRC initiatives. The licensee usually meets established commitment dates or provides written or verbal responses explaining the circumstances associated with delays and, in most instances, establishes new firm dates. Conference calls with the licensee staff are promptly established and include appropriate engineering, plant, and/or contractor personnel. The licensee consistently has sent advance copies of submittals by the Overnight Express Service and, when urgent matters were involved, telecopied submittals to the NRC staff on the same day.

The licensee's management and staff have continued to demonstrate a clear understanding of the technical issues. This conclusion is based on the evaluations obtained from the NRC technical reviewers and interactions with the Project Manager. Conservatism and a viable approach are generally exhibited. In several instances, the licensee challenged the staff position, but only when it believed plant safety would not have been compromised. An argumentative approach based on a legal interpretation is occasionally used to support a Commonwealth Edison Company technical position. In most cases, responses to NRC inquiries have been technically sound and conservative. The licensee has performed additional studies as necessary to resolve technical issues.

The licensee staff has been effective in anticipating and identifying potential problems related to Technical Specifications and regulatory requirements that may require licensing actions by the NRC and in notifying the NRC promptly so that resolution can be obtained on other than an emergency basis. The fact that the licensee has been able to avoid the need for any emergency changes to the Technical Specifications during this rating period is probably at least in part attributable to this effort.

The licensee's staff has asked the NRC staff many probing questions related to interpretation of the Technical Specifications, which indicates that considerable in-depth thought is being given to the applicability of the Technical Specifications by the licensee.

2. Conclusion

The licensee's performance was rated Category 1 in this area. The licensee's performance was rated Category 2 in this area during the previous assessment period.

3. Board Recommendation

None.

L. Training and Qualification Effectiveness

1. Analysis

Evaluation of this functional area was based on quality assurance, maintenance, snubber, equipment qualification, and region-based inspections, observations by the resident inspectors, results of licensed operator replacement and requalification examinations, and observations from the AIT on the power oscillations event.

Enforcement history in this area represented performance that conformed to NRC regulations. No violations or deviations were identified in this area during this assessment period.

Management involvement in ensuring quality in this functional area was adequate. Four senior reactor operator (SRO) replacement examinations and eleven SRO and seven reactor operator requalification examinations were administered by the NRC during the assessment period; three SRO candidates failed the replacement examination and two SROs failed the requalification examination. During this assessment period, the success rate (25%) for NRC-administered replacement examinations was far below the success rate (74%) during the previous assessment period. However, the sample size is too small to draw any meaningful conclusions. The pass rate for the requalification exams resulted in a satisfactory rating for the requalification program (89%) which is well above the average in RIII.

During this assessment period, the licensee received Institute of Nuclear Power Operations (INPO) accreditation for the following training programs at LaSalle County Station: shift technical advisor, instrument and control, electrical maintenance, mechanical maintenance, radiation protection, chemistry, and technical staff and managers. LaSalle is now accredited for all 10 INPO-accredited training programs. In addition, the licensee upgraded the equipment attendant (nonlicensed operator) training program in response to a spill inside the containment building while the fuel pool surge tank level was being increased, and provided additional maintenance training on control rod drive assemblies because of difficulties in a previous outage.

NRC concerns regarding training during this period included personnel errors such as having the drywell pressure switch valve out longer than allowed by Technical Specifications, not declaring inoperable Division II dc panels that became inoperable, and failing to submit a special report on high drywell temperatures; lack of formal training for personnel performing equipment qualification activities; and failure to document the training of electrical maintenance personnel on metal-clad circuit breakers. The licensee's response to these concerns was adequate. In addition, the AIT investigating the March 9, 1988 core power oscillations event determined that training had been insufficient to cope with this event, in that, while the operators were well trained to recognize the instabilities they were not training as to what to do to exit the instability region.

The following positive observations were made during various NRC inspections: training of operations and maintenance personnel was adequate; training and certification of engineering personnel and those performing visual examinations were adequate; training of electrical maintenance and quality control personnel on the installation of environmentally qualified kits was adequate; and virtually all members of the onsite emergency organization, were properly trained.

The licensee's approach to the resolution of technical issues and the staffing for this area were adequate, with the exception of the operator training provided in relation to dealing with instabilities or oscillations. The AIT observed that the operators had been trained very well on recognizing the instabilities but had little training on what to do to exit the instability region.

2. Conclusions

The licensee's performance is rated Category 2 in this area. The licensee's performance was rated Category 2 in this area during the last assessment period.

3. Board Recommendations

None.

V. SUPPORTING DATA AND SUMMARIES

A. Licensee Activities

1. Unit 1

At the beginning of this assessment period, LaSalle Unit 1 was operating routinely with no shutdowns or power reductions reported. The unit operated under normal power conditions and experienced several short outages for testing and maintenance throughout the assessment period. At the end of the assessment period, Unit 1 was preparing for its second refueling outage, which was scheduled for March 14, 1988. Other significant outages or major events that occurred during the assessment period are summarized below:

Significant Outages/Major Events

- a. December 4-6, 1986: Unit 1 underwent a forced outage and remained shut down so that the cause of main steamline high-radiation signals and PRM spiking could be investigated.
- b. January 26-27, 1987: Unit 1 scrambled and remained shut down so that inspection and repair of a loose connector on the generator lockout relay could be performed.
- c. February 4-9, 1987: Unit 1 underwent a cold shutdown so that the hydraulic system could be inspected and a crack could be repaired.
- d. March 12-16, 1987: Unit 1 declared an unusual event and shut down because of a failed drywell cooler fan. The unit remained shut down so that tests could be made on the inboard isolation valve, the cooling fan could be repaired, and linear voltage differential transfer A flow control valve problems could be corrected.
- e. March 19-25, 1987: Unit 1 underwent a reactor trip caused by a generator lockout and a subsequent turbine trip caused by an electrical fault. The unit was placed in hot shutdown to repair the auxiliary transformer.
- f. May 28-September 14, 1987: On May 28, 1987, Unit 1 underwent a reactor trip from low reactor vessel water level caused by the loss of the B reactor feedwater pump. The licensee elected to keep the unit shut down to begin its scheduled maintenance outage. Major activities included replacement of the B reactor recirculation (RR) pump, repairs to the A RR pump discharge valve, replacement of the A RR pump seals, work on the A RR pump flow control valve, and minor repairs in the drywell.

- g. September 16-18, 1987: Unit 1 was shut down because four of five fast-acting solenoids on the bypass valves were found to be inoperable when it underwent a reactor trip from about 5 percent power because of low water level caused by difficulties with feedwater control. During the outage, the licensee changed the dirty electrical hydraulic control oil that had caused the solenoid valves to stick.
- h. December 16-19, 1987: Unit 1 underwent a reactor trip because of low reactor vessel water level resulting from low pressure feedwater heater string isolation and a resultant feedpump trip on suction pressure. The unit remained shut down so that the feedwater pump minimum flow lines could be repaired, some intermediate range monitor detectors could be replaced, and maintenance on the reactor recirculation pump venting could be performed.

Unit 1 underwent 20 engineered-safety-feature actuations and eight reactor scrams (6 scrams at greater than or equal to 15 percent power, one scram at less than 15 percent power, and one scram without rod motion). None of the reactor scrams were the result of personnel errors or deficiencies in procedures.

2. Unit 2

At the beginning of the assessment period, LaSalle Unit 2 was operating routinely with no shutdowns or power reductions reported. Early in 1987, the unit was shut down and defueled for maintenance activities and remained in that mode until the middle of the assessment period. After that the unit operated under normal power conditions, and a new LaSalle operating record of 257 days of continuous operation was established. At the end of the assessment period, the unit was shut down after it scrambled on March 9, 1988. Other significant outages or major events that occurred during the assessment period are summarized below:

Significant Outages/Major Events

- a. January 5-June 16, 1987: Unit 2 was shut down for a maintenance and refueling outage. Major activities included repairs to static-o-ring switches, modifications to and replacement of the primary containment isolation dampers, installation of the alternate rod insertion system, inspection of the feedwater headers, and other inservice inspections and inservice testing.
- b. March 9-18, 1988: Unit 2 underwent a reactor trip caused by reactor core instability following the loss of both recirculation pump and steam heating to the feedwater heaters.

The unit remained shut down so that the B reactor recirculation pump seal and the main steam isolation valve solenoids could be replaced, the C residual heat removal pump motor could be shut down, and two major steam leaks could be repaired.

Unit 2 underwent eight engineered safety feature actuations and four reactor scrams (two scrams at greater than or equal to 15 percent power and two scrams without rod motion). Three of the four reactor trips were the result of personnel errors or deficiencies in procedures.

B. Inspection Activities

Forty-five inspection reports were issued during this assessment period. Two of these Inspection Reports, No. 373/86036 and No. 373/86037, No. 374/86037, were addressed in the previous SALP report. Forty-four inspection reports (including Inspection Report No. 373/88005, which was not issued yet) are discussed in this SALP report. Significant inspection activities are listed in Paragraph 2 of this section, "Special Inspection Summary."

1. Inspection Data

Facility Name: LaSalle

Unit: 1

Docket No.: 50-373

Inspection Report Nos.: 86039 through 86042, 86044 through 86046, 87001 through 87022, 87024, 87025, 87027 through 87036, 88002, 88003, and 88005.

Facility Name: LaSalle

Unit: 2

Docket No.: 50-374

Inspection Report Nos.: 86039 through 86042, 86044 through 86046, 87001 through 87022, 87024 through 87035, 88002, and 88003.

Table I

Number of Violations in Each Severity Level

| <u>Functional Areas</u> | <u>UNIT 1</u> | | | <u>UNIT 2</u> | | | <u>COMMON</u> | | |
|---|---------------|-----------|----------|---------------|-----------|----------|---------------|-----------|----------|
| | <u>III</u> | <u>IV</u> | <u>V</u> | <u>III</u> | <u>IV</u> | <u>V</u> | <u>III</u> | <u>IV</u> | <u>V</u> |
| A. Plant Operations | | | 1 | | | | | | |
| B. Radiological Controls | | | | | | | 2 | 1 | |
| C. Maintenance | | | 1 | | 1 | | | | |
| D. Surveillance | | | 2 | | | | | 1 | |
| E. Fire Protection | | | | | | | | 1 | |
| F. Emergency Preparedness | | | | | | | | 1 | |
| G. Security | | | | | | | 4 | 1 | |
| H. Outages | | | | | | | | | |
| I. Quality Programs and Administrative Controls Affecting Quality | | | | | 1 | | 1 | 1 | |
| J. Engineering/Technical Support | | | 1 | | 1 | | | | |
| K. Licensing Activities | | | | | | | | | |
| L. Training and Qualification Effectiveness | | | | | | | | | |
| | | | | | | | | | |
| TOTALS | <u>III</u> | <u>IV</u> | <u>V</u> | <u>III</u> | <u>IV</u> | <u>V</u> | <u>III</u> | <u>IV</u> | <u>V</u> |
| | 0 | 5 | 0 | 0 | 3 | 0 | 0 | 10 | 3 |

2. Special Inspection Summary

- a. An emergency preparedness exercise was held from April 28 through April 30, 1987 (Inspection Reports No. 373/87014 and No. 374/87014).
- b. A special inspection was conducted from September 15 through October 19, 1987, relating to the licensee's procurement items (Inspection Reports No. 373/87028 and No. 374/87028).

C. Investigation and Allegations Review

Ten allegations were reported during this assessment period. Three of the ten allegations and four previously reported allegations were closed during this assessment period.

D. Escalated Enforcement Actions

Escalated enforcement actions occurred that were related to the falsification of records and improper verification of a local leak rate valve lineup during Unit 2's refueling outage. This event was still under NRC review at the end of the assessment period. (Reference: Enforcement Case No. 87089, LER No. 50-374/87-002-01, Report Event No. 07510).

No other escalated enforcement actions occurred during this assessment period.

E. Licensee Conferences Held During Assessment Period

1. February 13, 1987, Region III Office: An enforcement conference was held with licensee representatives to discuss the failure to properly perform a second verification of a valve lineup during Unit 2's refueling outage and failure of operators to recognize off-normal conditions during refueling.
2. February 20, 1987, Region III Office: A management meeting was held with licensee representatives to discuss the implementation and weaknesses of the inservice testing program at LaSalle (Inspection Reports No. 373/86029; No. 374/86030).
3. April 24, 1987, Region III Office: An enforcement conference was held with licensee representatives to discuss a limiting condition for operation violation at the LaSalle Station on April 2, 1987.
4. July 18, 1987, Region III Office: A management meeting was held with licensee representatives to discuss the progress made at the LaSalle Station concerning a 10 CFR 50.54(f) letter that was issued to the licensee by the Region III staff on November 22, 1985.
5. July 24, 1987: A telephone conference with Region III personnel, licensee representatives, and headquarters personnel was held to discuss the clarification of the configuration of equipment qualification (EQ) splices of the high pressure coolant injection, low pressure core spray, and residual heat removal pump motor connectors and to review the environmental conditions and the schedule for replacing the EQ splices.
6. August 18, 1987, Region III Office: A management meeting was held with licensee representatives to discuss the guidance the licensee was preparing to issue to its nuclear stations regarding the proper interpretation of Technical Specification 3.0.A.
7. October 19, 1987, Region III Office: A management meeting was held with licensee representatives to discuss the results of safety system functional inspections (SSFI's) performed by the licensee and its proposal to verify modifications performed before the SSFI program is updated.
8. January 26, 1988, Region III Office: A management meeting was held with licensee representatives to discuss the effectiveness of the licensee's quality oversight of nuclear activities at the LaSalle Station. The purpose of the meeting was to delineate to the licensee NRC's expectations regarding quality oversight and to review various licensee's initiatives in this area.

F. Confirmatory Action Letters

One confirmatory action letter (CAL-RIII-87-026) was issued during the SALP 7 period. This letter pertained to a main steam isolation valve (MSIV) failure (i.e., one outboard MSIV failed to remain shut), which occurred on December 16, 1987. The letter listed the corrective actions to be taken by the licensee.

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

1. 10 CFR 21 Reports
2. Licensee Event Reports (LERs)

Unit 1

Docket No.: 50-373

LER Nos.: 86036, 86039 through 86043, 87001 through 87041, and 88001

Forty-eight LERs were issued for Unit 1 during this assessment period. The following is a cause code evaluation of these LERs:

| <u>Cause Code</u> | <u>Unit 1</u> |
|----------------------|---------------|
| Personnel Error | 27.1% (13) |
| Procedure Deficiency | 10.4% (5) |
| Design Inadequacies | 20.8% (10) |
| Component Failures | 27.1% (13) |
| External Cause | 0% (0) |
| Other/Unknown | 14.6% (7) |
| TOTALS | 100.0% (48) |

Unit 2

Docket No.: 50-374

LER Nos.: 86018, 86019, 87001 through 87020

Twenty-two LERs were issued for Unit 2 during this assessment period. The following is a cause code evaluation of these LERs:

| <u>Cause Code</u> | <u>Unit 2</u> |
|----------------------|---------------|
| Personnel Error | 27.3% (6) |
| Procedure Deficiency | 9.1% (2) |
| Design Inadequacies | 0% (0) |
| Component Failures | 59.1% (13) |
| External Cause | 0% (0) |
| Other/Unknown | 4.5% (1) |
| TOTALS | 100.0% (22) |

Collectively, the licensee issued 70 LERs during this assessment period. The number of LERs remained the same as that during the previous assessment period; however, personnel

errors decreased by 8.6 percent and the frequency of issuance decreased by 0.8 LER per month (SALP 6 = 70 LERs in 13.5 months; SALP 7 = 70 LERs in 16 months). SALP cause code comparisons are as follows:

| <u>Cause Code</u> | <u>(13.5 months) SALP 6</u> | <u>(16 months) SALP 7</u> |
|-----------------------|---------------------------------|-------------------------------|
| Personnel Error | 37.2% (26) | 27.2% (19) |
| Procedure Deficiency | 11.4% (8) | 10.0% (7) |
| Design Inadequacies | 10.0% (7) | 14.3% (10) |
| Component Failures | 0% (0) | 37.1% (26) |
| External Cause | 0% (0) | 0% (0) |
| Other/Unknown | 41.4% (29) | 11.4% (8) |
| TOTALS | 100.0% (70) | 100.0% (70) |
| Frequency of Issuance | 5.2/month | 4.4/month |

NOTE: The above information was derived from a review of LERs performed by the NRC staff and may not completely coincide with the licensee's proximate cause assignments.

H. NRR Activities

1. NRR/LICENSEE MEETINGS

DATE

| | |
|---|-------------------|
| Static-O-Ring Switch Meeting | January 22, 1987 |
| Safety Parameter Display System Meeting | March 19, 1987 |
| IST Program Meeting | April 7, 1987 |
| Licensing Activity Meeting | May 14, 1987 |
| Licensing Activity Meeting | December 2, 1987 |
| Licensing Activity Meeting | February 11, 1988 |

2. NRR/LICENSEE/REGION MEETINGS

| | |
|---|-------------------|
| Management Meeting To Discuss Licensee Performance | February 20, 1987 |
| Enforcement Conference on Primary Containment Pressure Switch | April 24, 1987 |
| 10 CFR 50.54(f) Closeout Meeting | June 18, 1987 |
| Static-O-Ring Switch Licensee Presentation | February 16, 1988 |

3. NRR SITE VISITS/MEETINGS
- | | |
|--|--------------------|
| SALP 8 Board - Seneca, Illinois | March 13, 1987 |
| Crutchfield Site Visit | June 17, 1987 |
| Inservice Testing Working Meeting | June 30, 1987 |
| Russian Delegation Site Visit | October 15, 1987 |
| General Site Visit | September 15, 1987 |
| AIT Inspection for March 9th Dual Recirculation Pump Trip Event | March 16, 1988 |
| AIT Exit Meeting | March 24, 1988 |
4. COMMISSION MEETINGS
- None
5. COMMISSIONERS' SITE VISITS
- None
6. NRR EVENT BRIEFINGS
- | | |
|---|-------------------|
| LaSalle 2 - Static-O-Ring Differential Pressure Switches | December 18, 1986 |
| LaSalle 2 - Dual Recirc Pump Trip and Power Oscillations | March 22, 1988 |
7. ACRS MEETINGS
- None
8. EXTENSIONS GRANTED
- None
9. RELIEFS GRANTED
- None
10. EXEMPTIONS GRANTED
- None
11. LICENSE AMENDMENTS ISSUED
- | | |
|---|-------------------|
| Amendment 47/29 Administrative | November 21, 1986 |
| Amendment 48 LaSalle 1 Control Rod Drive | February 3, 1987 |
| Amendment 30 LaSalle 2 Fine Motion Control Rod Drive | February 9, 1987 |
| Amendment 49 LaSalle 1 Diesel Generator | February 11, 1987 |

| | |
|--|-------------------|
| Amendment 31 LaSalle 2 | |
| Degraded Grid Voltage | April 14, 1987 |
| Amendment 32 LaSalle 2 | |
| Cycle 2 Reload | April 16, 1987 |
| Amendment 50/33 Group MSIV's | May 6, 1987 |
| Amendment 51 LaSalle 1 | |
| Snubber Functional Testing | October 19, 1987 |
| Amendment 52/34 Spent Fuel Pool | December 8, 1987 |
| Amendment 53/35 Traveling Incore Probe | February 10, 1988 |
| Amendment 54 LaSalle 1 | |
| Shutdown Cooling Isolation Valve | March 1, 1988 |
| Amendment 55/36 Jet Pump Operability | March 4, 1988 |
| Amendment 56/37 LER Rule | March 16, 1988 |

12. EMERGENCY TECHNICAL SPECIFICATIONS ISSUED

None

13. ORDERS ISSUED

None