SALP 10

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

Inspection Report No. 50-254-92001; 50-265-92001

Commonwealth Edison

Quad Cities Nuclear Station, Units 1 and 2

March 1, 1991, through May 31, 1992

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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 c a periodic basis and to evaluate licensee performance on the basis of this information. The program is supplemental to normal regulatory processes used to ensure compliance with NRC rules and regulations. It is intended to be sufficiently diagnostic to provide a rational basis for allocating NRC resources and to provide meaningful feedback to the licensee's management regarding the NRC's assessment of the facility's performance in each functional area.

An NRC SALP Board, composed of the staff members listed below, met on July 15, 1992, to review the observations and data on performance, and to assess licensee performance in accordance with the guidance in NRC Manual Chapter 0516, "Systematic Assessment of Licensee Performance."

This report is the NRC's assessment of the licensee's safety performance at Quad Cities Nuclear Station from March 1, 1991, through May 31, 1992.

The SALP Board for Quad Cities Nuclear Station was composed of the following individuals:

Board Chairman

E. G. Greenman

Director, Division of Reactor Projects (DRP)

Board Mambers

Η.	J.	Miller	Director, Division of Reactor Safety (DRS)
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Τ.	£.	Taylor	Senior Resident Inspector, Quad Cities Site
*J.	Μ.	Shine	Resident Inspector, Quad Cities Site
*p.	F.	Prescott	Resident Inspector, Quad Cities Site

*non-voting members

Other Attendees at the SALP Board Meeting

С.	J.	Paperiello	Deputy Regional Administrator
W.	Ε.	Scott	Performance Evaluator, NRR
С.	D.	Pederson	Chief, Reactor Programs Branch, DRSS
Μ.	С.	Schumacher	Chief, Radiological Controls and Chemistry
			Section, URSS
J.	₩.	McCormick-Barger	Chief, Emergency Preparedness Section, DRSS
J.	Μ.	Jacobson	Chief, Materials and P. ocesses Section, DRS

P. L. Hiland V. P. Lougheed	Senior Resident Inspector, Perry Project Engineer, DRP
M. J. Miller	Reactor Engineer, DRP
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C. F. G111	Senior Radiation Inspector, DRSS
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R. M. Lerch	Reactor Inspector, DRS
D. S. Butler	Reactor Inspector, DRS
M. P. Huber W. C. Gleaves	Mechanical Engineeringern, DRP

11. SUMM / OF RESULTS

Overall performance remained good and improved, somewhat, since the last assessment period. Management effectiveness in the functional area of Plant Operations improved significantly. Specifically, better communication., adherence to procedures, and a reduction in personnel errors contributed to the Category 2 rating. Good management effectiveness was also denoted by the reduction in personnel errors in the Maintenance/Surveillance functional area, which retained a Category 2 rating. Primarily, these improvements resulted from better management oversight and a concerted emphasis on personnel The Safety Assessment/Quality Verification functional area accountabili* he improvements in management oversight and received a Category 2 ra 1; however, resolution of technical issues was a concern in this area. A, sugh Engineering/Technical Support retained a Category 2 also reflect: rating, examples were noted where specifically identified issues were resolved, but the impact on like nt equipment was not evaluated promptly. In addition, ineffective communication by management of system engineering responsibilities was identified and weakness in corporate oversight of the MOV program implementation were present.

The Emergency Preparedness program remained strong; however, several weaknesses were identified in this functional area resulting in a Category 1 rating with a declining trend. These weaknesses were addressed in a remedial drill subsequent to the assessment period and will be evaluated during the current assessment period. Security maintained its longstanding Category 1 rating. Performance in the functional area of Radiological Controls remained steady with a fategory 2 rating.

The performance ratings during the previous assessment period and this assessment period according to functional areas are given below:

Functional Area	Rating Last Period	Rating This Period	Trend
Plant Operations Radiological Controls Maintenance/Surveillan(.) Emergency Preparedness Security Engineering (Technical	3 2 1 1	2 2 2 1 1	declining
Support Safety Assessment/Quality Verification	2	2	

111. PERFORMANCE ANALYSIS

A. Plant Operations

1. Analysis

Evaluation of this functional area was based on the results of 12 routine inspections and 2 special inspections conducted by resident, regional, and headquarters inspectors.

Enforcement history improved. Five Severity Level IV violations were issued, compared to two Severity Level III violations and two Severity Level IV violations during the previous assesment period.

Management effectiveness in ensuring quality was mixed. Ineffective communication of management expectations existed during the first half of the assessment period. This was evident in the poor operational performance during a main steam isolation valve (MSIV) failure and a high reactor water level recovery event. During the last quarter of the period, improvements in personnel performance were noted. These were partly attributed to corrective actions for the MSIV event and other initiatives implemented during the period, including assignment of a new assistant superintendent for operations (ASO), hiring a consultant to enhance the new ASO's development, better use of the operations overview program, more structured shift briefings, and formation of the event review committee. Also, communication between the nuclear station operators (NSOs) and station management has improved.

On the positive side, a comprehensive shutdown risk assessment was performed for the Unit 2 refueling outage which resulted in changes to schedules to eliminate high-risk situations and increased attention during certain critical activities. Significant improvements in the emergency operating procedures (EUP) program were made, particularly in the verification and validation program and its implementation. Increased management attention was provided for shift communications, procedural adherence, and reduction of personnel errors (noted as causes for the two Severity Level III violations discussed last assessment period). Shift control room engineer (SCRE) oversight of control room activities and operators' attention to detail continued to be a concern for a large part of the assessment period; however, improvements demonstrated by excellent operator response to events were noted during the last quarter.

Operational events also reflected a mixed performance. During the first half of the assessment period, operator responses to the MSIV failure and recovery from a high reactor water level event were considered non-conservative. Ineffective SCRE control of operating activities and lack of operator attention to detail were evident in these events. Additionally, late in the period, during the Unit 2 pressure vessel hydrostatic test, reactor vessel bottom head temperature exceeded technical specification (TS) minimum requirements for approximately 3 hours, due to lack of attention to detail and to test procedure inadequacy. On the positive side, operator response was very good for several events such as the transformer 22 deluge, bus 14-1 spray down and deenergization, two Unit 1 losses of annunciators, a Unit 2 high pressure coolant injection (HPCI) high radiation alarm, and a spurious main steam high flow event. These excellent responses were especially evident during the last guarter of the assessment period.

Identification and resolution of technical issues from a safety standpoint was mixed. On the positive side, use of the te specific simulator prior to planned evolutions improved operator performance. Control room deficiencies continued to be an issue. During an Augmented Inspection Team (AIT) review of the February 7, 1992, spurious closure of all MSIVs and subsequent reactor scram, the number of off-normal instruments (ONIs) was viewed as an additional challenge to plant operations, although not a scram contributor. As a result, increased management attention and resources were focused on ONIs. A program revision to enhance the ONI process is pending.

Housekeeping during this period improved over the last assessment period and was good. High traffic areas were well maintained. Correction of identified discrepancies was good with only minor discrepancies remaining. Unresolved items, as in the previous assessment period, involved the reactor feed pumps and recirculation motor generator oil leaks and the material condition of the residual heat removal (RHR) service water vaults.

Staffing levels were good as evidenced by six fully staffed shifts. For the Unit 2 refueling outage, day shift crews were augmented by extra SCREs and communications center senior reactor operators (SROs) to enhance the supervisory overview of the out of-service process. Overtime was controlled within NRC guidelines; a small number of exceptions had management preapproval.

Qualifications and training effectiveness were good, as shown by results on initial and requalification examinations. Two examinations were administered with 20 of 21 individuals passing. One requalification and two requalification retake examinations were administered, with 4 of 5 crews passing along with 20 of 24 individuals.

2. Performance Rating

Performance is rated Category 2 in this area. Performance was rated Category 3 during the previous assessment period.

3. <u>Recommendations</u>

None.

B. <u>Radiological Controls</u>

1. <u>Analysis</u>

Evaluation of this functional area was based on the results of six inspections by regional inspectors.

Enforcement history declined from the previous assessment period. One Severity Level IV and one Severity Level V violation were issued, compared with no violations during the previous assessment period.

Management effectiveness in ensuring quality was good with some exceptions. Strong support for water quality programs and analytical chemistry measurements was apparent. Improvements were seen in high radiation area access control, a weakness during the previous assessment period. Strong management support was also seen in as-low-as-reasonably-achievable (ALARA) initiatives such as source term reduction, formation of a group to integrate valve testing and repair work, and increased early emphasis on ALARA in work planning through permanent assignment of radiation protection personnel to other groups including mechanical maintenance and onsite engineering and construction. However, considerable unnecessary work and dose received from weaknesses in planning, scheduling, and coordinating several jobs formed in the RHR rooms during the recent outage. Management was also slow in improving service water radiation monitor operability, and in establishing appropriate maintenance priorities for the post-accident sampling system, although improvements were noted by the end of the assessment period.

The approach to the identification and resolution of technical issues from a safety standpoint was good. Performance in the NRC confirmatory analytical chemistry measurement program was excellent with all nonradiological comparisons in agreement and 85 of 87 radiological comparisons in agreement. Station dose remained relatively constant. While a significant decrease in dose occurred in 1991 (508 person-rem compared to the station 5 year average 835 person-rem), this was primarily due to limited outage time during the year. The number of personnel contaminations remained low. Considerable emphasis was placed on contamination controls, with both the amount of contaminated area and the target being lowered each year. Radioactive effluent releases remained well within TS limits. No radwaste shipping or transportation problems were experienced this period. The radiological environmental monitoring program continued to be well implemented.

Staffing, training, qualification, and experience level of the radiation protection and chemistry departments remained good. The training program was comprehensive and included system training with course content derived partially from work experiences. A strength in this area was initiation of a voluntary program for professional technician certification. Both technical and professional staff participated in this program.

2. Performance Rating

Performance is rated Category 2 in this area. Performance was rated Category 2 in the previous assessment period.

3. Recommendations

None.

C. Maintenance/Surveillance

1. Analysis

Evaluation of this functional area was based on the results of 15 routine inspections and 2 special inspections conducted by resident, regional and headquarters inspectors.

Enforcement history improved. Three Severity Level IV violations were issued, compared to six Severity Level IV violations during the previous assessment period.

Management effectiveness in ensuring quality was good, with two exceptions. Control of contractor activities in the Unit 2 battery charger room was ineffective. This lack of control resulted in two Alert declarations with reactor transients. Corrective action taken for the first event failed to preclude the second, nearly-identical, event. Additionally, personnel error contributed to b. th events and was evident on other occasions throughout the assessment period. Improvements in work package quality, maintenance planning, and schedule adherence were observed. Use of routine, planned outages to perform maintenance on key systems was considered a positive initiative. Performance in the area of security equipment maintenance was excellent, while good performance was noted concerning the fire protection and inservice inspection and testing programs. Improved containment penetration maintenance and TS surveillance testing was observed. Two surveillance omissions were related to personnel error by operations personnel. Otherwise, TS surveillance performance was excellent during the latter portion of the period. Personnel errors for the Maintenance/Surveillance area decreased overall, due to increased management involvement and support.

Forced and equipment outage rates were indicative of good performance. Emergency diesel generator (EDG) availability decreased during the period due mainly to planned outages and fuel line leaks. Balance-of-plant equipment problems involving feedwater regulating valves, condenser tube leaks, main and auxiliary transformers, and feedwater heater level control systems posed challenges to the operators and were the main contributors to the forced outage rate.

The approach to identification and resolution of technical issues from a safety standpoint was mixed. Although identified in the previous assessment period, large numbers of control room ONIs remained unresolved. Resources dedicated to resolving these ONIs were insufficient to reduce the backlog. repeat failure of an electromatic relief valve during a reactor scram recovery was attributed to incomplete root cause analyses of previous failures. Additionally, the lack of comprehensive preventive maintenance (PM) programs for 250 Vdc and 480 Vac switchgear was a weakness. On the positive side, improvements were noted with progress in reliability centered PM programs. increased use and effectiveness of thermography and laser alignment techniques, modification of the EDG fuel oil piping systems to stainless steel, and maintenance of a dedicated spare compressor for the control room air handling unit. Further initiatives, such as additional instrument maintenance staffing, accelerated PM schedules, and more thorough root cause analyses following equipment failures were instituted. The total corrective non-outage work request backlog remained manageable. The scope of preventive and predictive maintenance expanded; maintenance was performed in a timely manner.

Analysis of operational events indicated good performance. The number of personnel errors and component failures decreased from that of the previous assessment period. However, safety system failures attributed to the HPCI system were a concern. The major contributors to HPCI system unavailability were failures of the turbine stop valves. The root causes of the failures were incomplete or inadequate work packages. Work instruction quality improved during the period, and appeared to have corrected the causes of the stop valve failures.

Maintenance department staffing was good, and included competent and experienced personnel. The number of instrument mechanics was increased during the assessment period. Overtime was well controlled.

Maintenance training and qualifications were good, with no significant problems caused by poor training. Training improvements included use of additional equipment mock ups and specific motor operated valve (MOV) training.

2. Performance Rating

Performance is rated Category 2 in this area. Performance was rated Category 2 in the previous assessment period.

3. Recommendations

None.

D. Emergency Preparedness

1. Analysis

Evaluation of this functional area was based on the results of two inspections by regional inspectors.

Enforcement history remained excellent with no violations identified during this assessment period.

Management effectiveness in ensuring quality remained excellent. The emergency response facilities and related equipment remained well maintained. The operational support center (OSC) was moved to a larger and more suitable location in March 1992. Related procedures were revised to accurately reflect this relocation. Interfaces with State and local emergency support organizations remained excellent.

The approach to the identification and resolution of technical issues from a safety standpoint remained excellent. All actual emergency declarations occurring during the assessment period were correctly classified in a timely manner. The associated notifications to Illinois, Iowa and NRC officials were timely and detailed. The emergency planning (EP) coordinators performed thorough evaluations of records associated with each declaration. Resultant corrective actions were effectively implemented. Late in the assessment period, an emergency plan revision was submitted which included a number of refinements to the emergency action levels (EALs) used to classify emergency conditions. The EAL refinements were based on lessons learned from actual emergency declarations, exercise experiences, and licensed operator examinations which occurred at any of the licensee's nuclear stations. The quality of supporting documentation for the approved EAL refinements was excellent.

The 1991 and 1992 annual exercises were conducted during this assessment period. Both exercise scenarios were challenging, with multiple equipment failures warranting unrelated emergency declarations for each unit. The control room simulator was used in both exercises, while the new OSC was successfully demonstrated in the 1992 exercise. Both exercises involved the dispatch of about 20 inplant teams, deployment of offsite survey teams, and the assembly and timely accounting of all onsite personnel. Performance during the 1991 exercise was excellent with no concerns identified. In contrast, three performance weaknesses and one concern that required corrective action were identified during the April 1992 exercise. Proposed corrective actions were comprehensive and included upgraded training for all licensed personnel and communicators on accident assessment and notification requirements, revision of several procedures, and a remedial demonstration of the capabilities of control room and TSC staffs.

The station's EP group remained well staffed with two experienced coordinators and a full-time instructor. Planning areas of responsibility assigned to station and corporate EP staffs remained well-defined. The onsite and offsite emergency response organizations' (EROs) staffing levels remained excellent, ensuring continuous staffing capability for key and support positions. Semiannual off-hours drills, plus an off-hours TSC activation following an actual Alert declaration, demonstrated the capability of the onsite ERO to augment onshift personnel in a timely manner.

The station's emergency preparedness training program was well implemented. Administrative controls and practices were effective in ensuring that only currently trained personnel were listed in quarterly updates of the onsite ERO's callout rostor. All required drills were conducted and critiqued, as were non-required TSC tabletop drills held at about a quarterly frequency. Lesson plans were kept up to date; however, 1992 exercise performance revealed the need to upgrade training on accident assessment and notification requirements.

2. Performance Rating

Performance is rated Category 1 with a declining trend in this area. Performance was rated Category 1 during the previous assessment period.

3. <u>Recommendations</u>

None.

E. Security

1. Analysis

Evaluation of this functional area was based on the results of three inspections by regional inspectors.

Enforcement history declined from the previous assessment period. Three Severity Level IV violations were issued, compared with no violations during the previous assessment period.

Management effectiveness in ensuring quality of the security program was mixed. Plant and corporate management continued to effectively demonstrate excellent involvement in site security activities. Management aggressively supported security initiatives involving equipment improvements and upgrades, staffing, and training. Security management's effectiveness in ensuring the quality of day-to-day operations was good, although it declined from the previous period due to lack of attention to detail and weak management overview of certain aspects of the vital area access control program. In addition, management's monitoring of contractor activities regarding basic access control requirements was weak, as demonstrated by concerns over the adequacy of control of personnel and vehicles. Late in the assessment period, increased management attention to detail and program overview resulted in an improved level of control of day-to-day operations.

The approach to the identification and resolution of security issues continued to be excellent. Improved equipment reliability of protected area intrusion and assessment systems resulted from effective engineering and maintenance support. Equipment enhancements included upgrades to the vital area access control program. Redundant equipment continued to be effectively used when the effectiveness of primary equipment was reduced.

Performance in handling security events continued to be excellent. Onsite security events continued to be effectively identified and the number of events was reduced. The reduction was primarily due to a comprehensive tracking and trending program which identified problems and monitored corrective actions. Event reviews were thorough and complete. Resultant records were complete, well maintained and readily available. The handling of a potential labor issue was excellent.

Security staffing continued to be ample and was effectively utilized in day-to-day operations activities. A close working relationship existed between security contractor site personnel and the licensee's security personnel.

The effectiveness of the training and qualification program continued to be excellent. Security training continued to excel in the area of armed contingency response. Response proficiency continued to be demonstrated through a frequent and aggressive tactical drill program. Computer aids were used to heighten contingency awareness.

Overall implementation of the initial fitness-for-duty program continued to receive appropriate management attention and support. Good corrective action was implemented for the one weakness identified.

2. Performance Rating

Performance is rated Category 1 in this area. Performance was rated Category 1 in the previous assessment period.

3. <u>Recommendations</u>

None.

F. Engineering/Technical Support

1. Analysis

Evaluation of this functional area was based on the results of 13 routine inspections, 3 special inspections, and 5 operator licensing examinations

conducted by resident. regional, and headquarters inspectors.

Enforcement history was good. Two Severity Level IV violations were issued, compared to four Severity Level IV violations during the previous assessment period.

Management effectiveness in ensuring quality continued to be mixed. On the positive side, an engineering group was formed to improve the control of modifications and post-modification testing, a problem during the last assessment period. As a result of increased corporate presence onsite, improvements were observed in communication of station activities between corporate engineering and the technical staff and in engineering involvement in day-to-day station operations. Accountability and control of engineering contractors design activities improved. Management involvement in operator requalification ensured that simulator scenarios were comprehensive and tested the EOPs to an appropriate depth.

In some instances management was not effective in assuring quality. After testing indicated insufficient flow to the emergency core cooling system room coolers, adequacy of provided flow was not promptly verified. Although improvements in control of engineering contractors were observed, weaknesses still existed as evidenced by inadequacies in electrical distribution system calculations. Corporate management was not fully effective in implementing the MOV program, even though adequate resources were dedicated, as evidenced by procedure inadequacies and fragmented responsibilities between site, corporate, and contractor personnel. For example, lack of guidance for recording stem friction factors resulted in inaccurate values being used in MOV calculations. Although system engineers were considered to be the focal point for all system work, management failed to clarify responsibilities for modification, testing, and trending of equipment problems.

The approach to the identification and resolution of technical issues from a safety standpoint remained mixed. On the positive side, system engineers effectively interfaced with the maintenance and operations departments on a day-to-day basis. Good resolution of technical problems was evident in the HPCI pump laser alignment, oversight of the EDG modifications, improvement of the hydrogen addition system operation, and resolution of the recirculation motor-generator set speed instability. Also the PM plan established by the technical staff for penetrations requiring local leak rate testing showed positive results during this assessment period. Additionally, onsite corporate engineering made progress in the system verification and drawing revision programs and provided good support for the shroud access cover replacement. Testing and root-cause analysis techniques employed in response to the February scram were systematic and extensive.

On the other hand, repetitive problems with an electromatic relief valve, drifting reactor vessel water level Yarway indicators, and abnormalities associated with the main steam line flow instruments were not identified. These items caused unnecessary operating challenges during the February scram. Engineering resolution was required on some control room ONIs. A component replacement program was developed to resolve these ONIs; however, this program had only limited use during the assessment period. Additionally, longstanding problems with secondary containment testing continued. At times, the engineering staff demonstrated a lack of understanding or failed to exercise appropriate conservatism regarding safety-significant issues. This was of particular concern in cases impacting continued plant operations. For example, corporate engineering did not recognize the significance of calculations showing that heat loads in the RHR and EDG cooling water pump vaults exceeded the vault coolers capacities. In another case, although significant flow restrictions were identified last assessment period in the Unit 1 RHR heat exchanger room coolers, inspections were not conducted for the Unit 2 coolers until towards the end of this assessment period. When tested, one Unit 2 cooler was found to be plugged beyond design limits. In addition, several MOV issues could not be supported by technical data.

Engineering and technical support staffing was good as evidenced by reduction in the backlog of modifications compared with the last assessment period. The system engineering supervisor position was eliminated during this assessment period. Given the relative inexperience of many of the system engineers, this placed additional burden on the technical staff supervisor and group leaders. Near the end of the assessment period, responsibilities for oversight of the system engineers was assigned to one of the assistant technical staff supervisors to address the problem. The staffing of the training department was sufficient to meet the training department and NRC examination requirements.

Training and qualification effectiveness for licensed individuals was good, based on the passing rate. Initial license candidates' knowledge and use of annunciator response procedures, EOPs, and overall crew performance were also good. In contrast, weaknesses identified during the requalification examinations included crew communications and procedural use. Training for system engineers was also good and consisted of a 4 week system engineering course and licensed operator training on their assigned systems. System engineers were also provided the opportunity to attend seminars and workshops to supplement their on-the-job training.

2. Performance Rating

Performance is rated Category 2 in this area. Performance was rated Category 2 in the previous assessment period.

3. Recommendations

None.

G. Safety Assessment/Quality Verification

1. Analysis

Evaluation of this functional area was based on the results of 12 routine inspections and 3 special inspections conducted by resident, regional, and headquarters inspectors. In addition, requests for amendments, exemptions or

reliefs, responses to NRC generic communications, and other interactions with the NRC staff were considered.

Enforcement history declined from the previous assessment period. Six Severity Level IV violations were issued, compared to four Severity Level IV violations during the previous assessment period.

Management effectiveness in ensuring quality was mixed. Management's response to the poor performance during the previous assessment period was good. Examples of good performance include management overview of plant activities, such as the 1/2 EDG pre-lube modification; a change to a management style that increases personnel accountability; and the formation of a task force to review root causes of events that occurred from January 1991 to April 10, 1992. This task force, formed late in this assessment period, identified a need for corrective actions to focus more attention on personnel accountability. Further examples of management's good response to their poor performance during the previous assessment period included increased visits to other utilities to become more aware of updated industry practices, use of the nuclear network and "Lessons Learned" for problem prevention, more effective shift briefings, and the assignment of a new ASO.

In some instances, corrective actions were not effective. For example, three violations were issued for ineffective corrective actions involving operator response to an MSIV failure, 250 Vdc maintenance, and missing surveillance acceptance criteria. The plugged RHR room cooler heat exchanger, the problem with the 1/2 EDG cooling water pump cubicle cooler power supplies, the inadequate resolution of ONI issues, and the delay in the 115 Vac control room 120A relay coils replacement were additional examples of ineffective corrective actions. Although the performance enhancement program (PEP), a major corrective action program, focused attention on problem areas, it was not entirely effective. The 1992 Management Plan was initiated to track that critical activities were performed in a timely manner.

During the assessment period, the onsite nuclear safety group's effectiveness in assessing the safety perspective of plant activities was good. One major effort involved the shutdown risk consideration for the Unit 2 refueling outage. The reviews were good in identifying outage schedule and work activity issues. The nuclear quality program (NQP) group's performance-based surveillance and audits were good in assessing personnel performance in many areas. Audit-finding resolution was good.

During the latter part of the assessment period, new initiatives for improved performance were initiated. An event review committee was formed to ensure that any event occurring in the previous 24 hours received appropriate reviews, and methods to improve management-employee communications were implemented. The heightened level of awareness (HLA) program and an enhanced work planning process continued to provide a good management review of critical activities before they occurred. Two exceptions to the good use of the HLA program were the transformer 22 deluge event and the Unit 2 vessel bottom head temperature concern.

The quality and technical content of submittals, including those submittals

responding to NRC initiatives (Bulletins, Generic Letters), were good. In some instances (such as amendment requests concerning the vacuum breaker modifications to the HPCI steam exhaust line and the emergency filtration system heater temperature differential), additional information had to be provided. This information was provided promptly and was of good technical quality.

The approach to the identification and resolution of technical issues from a safety standpoint was mixed. On the positive side was resolution of the safety system functional inspection findings discussed in the previous assessment. In addition, maintenance initiatives improved leak rate testing results. However, weaknesses in onsite and corporate engineering support for problem resolution were identified during both the electrical distribution system functional inspection and the service water inspection.

Staffing of the quality assurance and quality control groups was good. Resources were available to implement the audit schedule and to witness work activity hold points.

Training and qualification of the quality oversight groups were good Toward the end of the assessment period, training was initiated to improve the quality of the 10 CFR 50.59 reviews, which resulted in a noticeable improvement in one review prepared after the training began.

2. Performance Rating

Performance is rated Category 2 in this area. Performance was rated Category 2 during the previous assessment period.

3. <u>Recommendation</u>

None.

IV SUPPORTING DATA AND SUMMARIES

A. <u>Major Licensee Activities</u>

Significant outages and other major events are listed below.

- The SALP period was entered with Unit 1 cycle 11 refueling outage in progress (started November 12, 1990).
- On April 7, 1991, an Unusual Event was declared and Unit 2 was shut down following the Unit 1 reserve auxiliary transformer (T12) being taken out-of-service to repair an internal arcing problem.
- 3. On April 30, 1991, Unit 1 was synchronized to the grid following the

refueling outage.

- On May 22, 1991, Unit 1 was shut down due to Unit 1 main transformer problems.
- On June 26, 199., Unit 1 was synchronized to the grid following main transformer replacement.
- On September 19, 1991, Unit 2 was shut down due to an inboard MSIV failing closed.
- 7. On October 8, 1991, Unit 2 was synchronized to the grid.
- On January 1, 1992, Unit 2 cycle 11 refueling outage is entered by manually tripping the turbine to produce an automatic SCRAM.
- On February 7, 1992, a Unit 1 scram occurred due to high steam flow indication.
- 10. On February 18, 1992, Unit 1 was synchronized to the grid following completion of all Confirmatory Action Letter items.
- 11. On February 14, April 7, and April 9, 1992, Alerts were declared on Unit 1 due to a loss of all annunciators.
- On May 11, 1992, Unit 2 was synchronized to the grid following its refueling outage.

B. Major Inspection Activities

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The inspection reports discussed in the SALP are listed below:

Unit 1, Docket No. 50-254, Inspection Report Nos. 91007, 91010-91025, 92002-92013, and 92201.

Unit 2, Docket No. 50-265, Inspection Report Nos. 91004, 91006-91022, 92002-92006, 92008-92013, and 92201.

- From April 1, 1991, to May 10, 1991, the NRC conducted a special electrical distribution system functional team inspection (Inspection Report No. 254/91011; 265/91007).
- From February 8, 1992, to February 13, 1992, the NRC conducted a special augmented inspection team inspection (Inspection Report No. 254/92007).
- From March 2, 1992, to May 1, 1992, the NRC conducted a special service water team inspection inspection Report No. 254/92201; 265/92201).