U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Systematic Assessment of Licensee Performance

Consumers Power Company

PALISADES NUCLEAR PLANT
Docket No. 50-255
Report No. 50-255/82-16

Assessment Period

July 1, 1980 to June 30, 1981

March 1982

CONTENTS

Docket No. 50-255

Consumers Power Company
ATTN: Mr. R. B. DeWitt
Vice President
Nuclear Operations
212 West Michigan Avenue
Jackson, MI 49201

Gentlemen:

This is to confirm the conversation between Mr. D. J. Vande Walle and Mr. D. C. Boyd of the Region III staff scheduling April 14, 1982 at 2:00 p.m. as the date and time to discuss the Systematic Assessment of Licensee Performance (SALP) for the Palisades Nuclear Plant. This meeting is to be held at the Sheraton Hotel, One Jackson Square, in Jackson, Michigan.

Mr. James G. Keppler, the Regional Administrator, and members of the NRC staff will present the observations and findings of the SALP Board. Since this meeting is intended to be a forum for the mutual understanding of the issues and findings, you are encouraged to have appropriate representation at the meeting. As a minimum we would suggest Mr. J. D. Selby, President, Mr. R. J. Reynolds, Executive Vice President, or Mr. R. W. Montross, Plant Manager, and managers for the various functional areas where problems have been identified.

The enclosed SALP Report which documents the findings of the SALP Board is for your review prior to the meeting. Subsequent to the meeting the SALP Report will be issued by the Regional Administrator.

Enclosure 1 to this letter summarizes the more significant findings identified in the SALP Board's evaluation of the Palisades Plant for the period of July 1, 1980 to June 30, 1981.

If you desire to make comments concerning our evaluation of your facility, they should be submitted to this office within twenty days of the meeting date; otherwise, it will be assumed that you have no comments.

In accordance with Section 2.790 of the NRC's "Rules of Practice" Part 2, Title 10, Code of Federal Regulations, a copy of this letter, the SALP Report, and your response and committments (or your comments, if any) will be placed in the NRC's Public Document Room when the SALP Report is issued.

The response (or comments) requested by this letter are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, PL 96-5111.

If you have any questions concerning the SALP Report for the Palisades Plant we will be happy to discuss them with you.

Sincerely,

J. A. Hind, Director
Division of Emergency Preparedness
and Operational Support

Enclosures:
1. Significant Findings
2. Palisades Plant SALP Report
(5 copies)

cc w/encls:
Resident Inspector, RIII

Enclosure 1

Significant SALP Report findings for the Palisades Nuclear Generating Station.

General Observations

During the July 1, 1980 to June 30, 1981, evaluation period a significant improvement to the earlier conditions which resulted in the issuance of an order on November 9, 1979, and the issuance of a Confirmatory Order on March 9, 1981, has occurred. This improvement in the licensee's regulatory performance was particularly noteworthy during the latter portion of the evaluation period. During this evaluation period the licensee has developed and is implementing a comprehensive program designed to improve their regulatory performance. (Reference Confirmatory Order dated March 19, 1981.) Periodic meetings have been held to update the NRC on the progress of this program. To date the implementation of these commitments has remained essentially on schedule.

While there have been two regulatory problems resulting from ineffective managements controls since the evaluation period, for which escalated enforcement action is being considered, these problems are not considered indicative of a more serious problem.

Weaknesses in staffing and training continued through and beyond this evaluation period with staffing shortages most significant among licensed operators. To date, the efforts of the licensee to resolve these problems has met with limited success.

1. Functional Area

   Plant Operations

   Improvement in the overall functioning in this area has occurred. This improvement is attributed to organizational and personnel changes as well as strengthened management controls. Problems regarding adherence to procedure involving individual interpretation of the Technical Specifications and procedural intent still exist. These problems are not considered to be programmatic in nature and are in the progress of being resolved by the licensee's program to improve regulatory performance.

2. Functional Area

   Radiological and Environmental

   Overall performance improved from the previous SALP period, but considerable NRC effort was required to achieve satisfactory responses to the significant findings of the Health Physics Appraisal.

3. Functional Area

Maintenance

There is a need for procedure improvements and expansion of procedure coverage in the area of corrective maintenance. Current procedures often reference vendor manuals which do not always provide the required information. The licensee has recognized this need and progress is being made in upgrading of maintenance procedures.

4. Functional Area

Surveillance

Early in the evaluation period there continued to be major programmatic problems in this area involving personnel error and procedural deficiencies. These problems resulted in escalated enforcement actions in the form of an Immediate Action Letter (IAL) on January 9, 1981, and a Confirmatory Order on March 9, 1981. A comprehensive Regulatory Performance Improvement Program was developed and implemented by the licensee and the performance in this area has improved. Some problems with personnel errors and failure to follow procedures still exist, but usually involved a lack of familiarity with recently revised procedures. Such problems appear to decline as personnel becomes familiar with revised procedures.

5. Functional Area

Licensing Activities

Improvement is needed in the timeliness and quality of the licensee's response to NRR issues. Followup on meeting commitments is weak. Licensee performance on Systematic Evaluation Program (SEP) topics showed improvement during this evaluation period.

6. Functional Area

Quality Activities

Significant programmatic problems exist in this area. Four of the eighteen 10 CFR 50, Appendix B, Criteria have not been audited at all during this evaluation period. Qualified auditor staffing was insufficient and management chose to address other activities to the detriment of the audit program.

Additional attention by both the licensee and the NRC is warranted in this area.

Consumers Power Company

David J VandeWalle
Nuclear Licensing Administrator

General Offices: 1945 West Parnall Road, Jackson, MI 49201 • (517) 788-1636

April 29, 1982

James G Keppler, Administrator
Region III
US Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

DOCKET 50-255 - LICENSE DPR-20
PALISADES PLANT - SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE (SALP)

Your letter of March 31, 1982 transmitted the preliminary SALP report for the Palisades Plant for the assessment period of July 1, 1980 to June 30, 1981, and solicited Consumers Power Company's comments on the report. Our comments regarding the SALP report are provided in the attachment to this letter. These comments pertain solely to Section IV.10 entitled "Quality Activities".

David J VandeWalle
Nuclear Licensing Administrator

CC Director, Office of Nuclear Reactor Regulation
Director, Office of Inspection and Enforcement
NRC Resident Inspector - Palisades

Attachment - 5 pages

MAY 3 1982

CONSUMERS POWER COMPANY
PALISADES PLANT - 50-255

LICENSEE COMMENTS ON SECTION IV.10, QUALITY ACTIVITIES

For the Period July 1, 1980 to June 30, 1981

ATTACHMENT

LICENSEE COMMENTS ON SECTION IV.10, QUALITY ACTIVITIES

A. Audit Program

The identified deficiencies of the audit program have been corrected with the following action:

1. A 1981 schedule of integrated QA Program and Technical Specifications audits was developed and completely implemented. In 1981, 16 audits were conducted at Palisades. A similar program and schedule for 1982 is in place and on schedule.

2. All 18 criteria of 10 CFR 50, Appendix B are being audited. Recent audits in the area of the four criteria not previously audited include:

Criteria 2 - Quality Assurance

Audit Description	Audit Number	Audit Date
QA Feedback Program (NUREG-0737)	A-SA-81-1	2/ 2/81
Packaging and Shipping of Greater Than "Type A" Quantities of Radioactive Materials	A-QA-81-3	2/24/81
QA/QC - Preparation and Revision of Quality Assurance Program Procedures for Operations	A-QA-81-7	7/ 6/81
Health Physics, Radiological Monitoring - Effluent Streams	A-QT-81-7	9/16/81
Fire Protection	A-QT-81-3	10/19/81
Palisades Training	A-QT-81-24	12/ 7/81
QA Feedback Program (NUREG-0737)	A-TS-81-3	12/14/81
Classification of Safety-Related Items and Q-List Material	A-QA-82-3	2/ 2/82

Criteria 7 - Control of Purchased Material, Equipment and Services

Audit Description	Audit Number	Audit Date
Nuclear Fuel Receipt, SNM, Accountability & Refueling	A-TS-81-2	11/16/81
QA/QC - Source Surveillance and Inspection; Receiving Inspection	A-QA-81-7	7/ 6/81

In addition, several improvements have been made to the Supplier Evaluation and Selection Program. In order to effectively implement this program procedure, a QA Department Procedure, QADP VII-2 - Supplier Evaluation for the Nuclear Quality Assurance Program Approved Supplier List (NQAPASL) was prepared, approved, and issued 7/27/81. Immediate implementation of this QADP was instituted and since that time we have performed two hundred forty (240) Supplier Evaluations. Some of these evaluations have resulted in scheduling of audits at supplier facilities. Twenty-two (22) Supplier Audits were performed in 1981 and four (4) for 1982. A Supplier Audit Schedule for 1982 shows thirty-one (31) additional Supplier Audits are contemplated.

Criteria 10 - Inspection

Audit Description	Audit Number	Audit Date
Plant Maintenance	A-QT-81-3	6/ 8/81
QA/QC - Operations Surveillance	A-QA-81-7	7/ 6/81
Inservice Inspection	A-QT-81-15	10/26/81

Criteria 13 - Handling, Storage and Shipping

Audit Description	Audit Number	Audit Date
Nuclear Fuel Receipt, SNM, Accountability, Refueling	A-TS-81-2	11/16/81
Control of Material, Handling, Shipping and Storage	A-QA-82-1	1/18/82

3. When conducting audits, the team leader has always been qualified to ANSI N45.2.23. Team members have been trained and qualified plus knowledgeable in the area being audited. This approach of selecting audit teams makes use of QA Department personnel, other Nuclear Operations personnel and consultants, as appropriate.

4. Communications have been improved with monthly updates to the Director, QA - Nuclear Operations and quarterly updates to the Vice President - Nuclear Operations.

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B. The Palisades Administration Procedure that allowed bypassing a QC hold point if a QC Inspector was unavailable was revised on 7/22/81 to delete this provision for bypassing. Additionally, activities requiring an intensified level of QC inspections were identified and included in the QC Procedure manual on 5/29/81.

C. The five minor items of noncompliance that were identified during an inspection of administration, QA records and procurement were corrected as follows:

1. Level V - procurement documents failing to reference applicable regulatory requirements.

   The cause of this problem was attributed to turnover of key personnel (Requisition Engineer). Corrective measures included a thorough review of the deficiency and proper requirements with all personnel in the procurement review cycle and segregation of all automatic reorders for "Q" components to assure they will be reviewed and upgraded where required.

2. Level V - failure to write nonconforming material reports when required.

   This problem was restricted to material that had been conditionally released. Personnel were unfamiliar with the requirement. Problem was reviewed with personnel (3/2/81) and formal training provided (11/3/81). Changes were made on conditional release tag to address need for an NMR.

3. Level VI - failure to store or maintain QA records per ANSI N45.2.9.

   The cause of this problem was determined to be incorrect interpretation of ANSI requirements by Plant personnel. Only copy of completed records was retained in various department working files for 1-2 years prior to turnover to the Document Control Center (DCC). Corrective measures included the turnover of these working files to DCC and complete revision to the Plant Administrative Procedures for records control to require prompt turnover to DCC upon record completion.

4. Level V - failure to keep controlled drawings up to date.

   The causes of this problem included lack of a mechanism for the site to issue timely print changes, and the fact that the control room drawings redlined by DCC personnel were not the convenient sized drawings for operator usage. Corrective actions included updating of convenient sized drawings used by operators and revisions to drawing control procedures to assure these drawings will be updated when revisions are made.

5. Level V - various nonprogrammatic purchasing deficiencies.

Causes of these problems included inadequate specification of requirements, inadequate code training for receipt inspectors and inadequate QA Department Procedure for controlling evaluation of suppliers. Corrective actions included review of material problems noted by NRC and any other material in a similar status, formal code training for receipt inspectors, removal of certain suppliers from Approved Suppliers Lists (ASL), reevaluation of other suppliers and updating ASL, revisions to QADP IV-1 controlling procurement document reviews, and issuance of a new QADP (VII-2) to control supplier evaluation.

D. The two items of noncompliance identified during inspections of corrective action programs and reporting were addressed as follows:

1. Level V - failure to initiate two required corrective action documents and examples of overdue corrective actions.

The cause of this problem was failure of Plant personnel to recognize the need for a corrective action document. Corrective action is in progress to clarify the criteria for initiation of corrective action documents and provide the needed training so that First-Line Supervisors readily understand when a corrective action document is required. (Due date for revised criteria is 7/1/82.)

2. Deficiency - reporting requirements for inoperable snubbers.

This problem resulted from a difference in interpretation of Technical Specifications reporting requirements. This difference in interpretation has been resolved and the nonconformance was resolved February 1981.

E. Corrective Action System

The corrective action system at Palisades was modified in September 1981 to include the concept of a Corrective Action Review Board composed of functional superintendents. The purpose of this board is to expedite the evaluation of reported deficiencies and to provide a broad base of experience for determining corrective action.

During September 1981, a procedure was instituted at Palisades that requires notification to progressively higher levels of Management if specified actions are not completed on schedule.

Both of these changes are currently in effect at Palisades and have been used to process corrective action documents originated beginning 9/15/81. The new Nuclear Operations Department Standards include a requirement for the continuation of this concept at Palisades, plus its implementation in all other areas of nuclear operations.

I. INTRODUCTION

The NRC has established a program for Systematic Assessment of Licensee Performance (SALP). The SALP is an integrated NRC Staff effort to collect available observations and data on a periodic basis and evaluate licensee performance based upon these observations. SALP is supplemental to normal regulatory processes used to ensure compliance to the rules and regulations. SALP is intended from a historical point to be sufficiently diagnostic to provide a rational basis: (1) for allocating future NRC regulatory resources, and (2) to provide meaningful guidance to licensee management to promote quality and safety of plant construction and operation.

A NRC SALP Board composed of managers and inspectors who are knowledgeable of the licensee activities, met on October 22, 1981, to review the collection of performance observations and data to assess the licensee performance in selected functional areas.

This SALP Report is the Board's assessment of the licensee safety performance at Consumers Power Company, Palisades Nuclear Plant, for the period July 1, 1980 to June 30, 1981.

The results of the SALP Board assessment in the selected functional areas were presented to the licensee at a meeting held on April 14, 1982.

II. CRITERIA

The licensee performance is assessed in selected functional areas depending whether the facility is in a construction, pre-operational or operating phase. Each functional area normally represents areas significant to nuclear safety and the environment, and are normal programmatic areas. Some functional areas may not be assessed because of little or no licensee activities or lack of meaningful observations. Special areas may be added to highlight significant observation.

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

1. Management involvement in assuring quality.

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

3. Responsiveness to NRC initiatives.

4. Enforcement history.

5. Reporting and analysis of reportable events.

6. Staffing (including management).

7. Training effectiveness and qualification.

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

Based upon the SALP Board assessment each functional area evaluated is classified into one of three performance categories. The definition of these performance categories is:

Category 1. Reduced NRC attention may be appropriate. Licensee management attention and involvement are aggressive and oriented toward nuclear safety; licensee resources are ample and effectively used such that a high level of performance with respect to operational safety or construction is being achieved.

Category 2. NRC attention should be maintained at normal levels. Licensee management attention and involvement are evident and are concerned with nuclear safety; licensee resources are adequate and are reasonably effective such that satisfactory performance with respect to operational safety or construction is being achieved.

Category 3. Both NRC and licensee attention should be increased. Licensee management attention or involvement is acceptable and considers nuclear safety, but weaknesses are evident; licensee resources appear to be strained or not effectively used such that minimally satisfactory performance with respect to operational safety or construction is being achieved.

III. SUMMARY OF RESULTS

Functional Area Assessment	Performance Category		
	Category 1	Category 2	Category 3
1. Plant Operations		X	
2. Radiological and Environmental		X	
3. Maintenance		X	
4. Surveillance			X
5. Fire Protection	X		
6. Emergency Preparedness		X	
7. Security and Safeguards		X	
8. Refueling		X	
9. Licensing Activities			X
10. Quality Programs			X

IV. PERFORMANCE ANALYSES

1. Plant Operations

a. Analysis

NRC examination of this functional area encompassed parts of eleven inspections to evaluate compliance to Technical Specifications and plant procedures. A total of five noncompliances was identified, three of which involved failures to maintain required equipment operability. All five of the noncompliances were identified in the first half of the SALP period. No repetitive noncompliance occurred. Two of the noncompliances were addressed in the previous SALP and were not considered in determining the current rating.

Consideration was given to noncompliance in this functional area in development of escalated enforcement for more significant failures to maintain required equipment operability described in the discussions of functional area 4 below.

Ten Licensee Event Reports (LER's), relating to this functional area, were caused by personnel error (six events) or by procedural deficiencies (four events) and are therefore considered preventable. Eight of these ten events occurred in the first half of the SALP period, including five of the six events which involved safety component inoperability. Differences of opinion between NRC and the licensee concerning classification of a reportable event cause were neither significant nor systematic; although, in a few cases involving both personnel error and procedure deficiency, the licensee generally reported the latter as the cause. One item relating to inadequate condensate makeup inventory (LER 80-45) has been reclassified by NRC to the preventable category as a personnel error (for the purposes of this report) since the condition developed slowly, the licensee was aware of it, and adequate corrective action to prevent falling below minimum requirements was not taken.

Seven plant trips occurred during this SALP period; six in the first half. In each case, plant equipment performed as designed. Four of the trips were manually initiated by plant operators before developing transient conditions could activate automatic trip functions. Six of the seven trips evolved from apparently random component failures, with the other being caused when construction workers near the switchyard cut relay control cabling with a backhoe, initiating an inadvertent generator trip.

Management controls in the area of plant operations were in a condition of considerable flux during the SALP period, particularly in the final few months. This resulted from

organizational and personnel changes initiated by the licensee. Some examples of specific changes are:

(1) consolidation and clear definition of responsibility for equipment control

(2) improved identification of proper system/component status

(3) clarification and strengthening of shift turnover requirements

(4) implementation of independent verification for proper manipulation of safety-related controls

(5) daily corporate auditing of plant operations

(6) corporate review of reportable events caused by personnel errors or procedural inadequacies

(7) operations procedure upgrades to assure knowledge of and control over interactions with safety systems

(8) procedure upgrades to assure inclusion of proper prerequisites, precautions, and limitations

(9) strengthened personnel motivation program, including improved communication of expectations and use of incentives and disciplinary action

As a result of these and other activities, management controls evolved to a position of greater strength during this SALP period.

Weaknesses in staffing and in training continued in this SALP period, with staffing shortages most significant among licensed operators. The licensee is working to resolve this problem, but only managed to maintain an approximately constant staffing level, since there were some license-holders who left the licensee's employment.

Seven reactor operator exams were administered. Three of these were repeat exams for a previous failure within this same appraisal period. Only two applicants passed these exams and were issued reactor operator licenses. Two senior reactor operator license exams were administered, with one applicant passing and the second passing on a partial reexamination. This performance on licensing exams is considered indicative of a need to improve training effectiveness.

b. Conclusion

The licensee is rated Category 2 in this area. Strong management involvement and control developed over the SALP period are offset by weaknesses in staffing and training. Regulatory performance, as reflected in the enforcement history, markedly improved over the course of this SALP period.

c. Board Recommendations

Licensee regulatory performance during operation of the Palisades plant demonstrates marked improvement in the second half of the SALP period compared to the first half or to the previous SALP period. If performance continues at the improved level following the current refueling, the inspection program should be reduced to normal.

The Board has concerns relative to the training area, which should be carefully monitored during future inspections, including review of the licensee's Regulatory Performance Improvement Program in this area under the March 9, 1981, Order.

2. Radiological and Environmental Controls

a. Analysis

Three inspections, Health Physics Appraisal, Confirmatory Measurements and Environmental Protection, were conducted during the evaluation period by region based inspectors. The resident inspectors also inspected in this area. The Health Physics Appraisal, conducted early in the evaluation period, identified seven significant programmatic weaknesses and one noncompliance. These findings were incorporated in SALP 1 and therefore will not be included in this evaluation. Two additional items of noncompliance were identified in the areas of radioactive material control and radioactive effluent reporting during this period.

After repeated requests by Region III, the licensee responded satisfactorily to the Health Physics Appraisal significant findings. The licensee's proposed corrective actions, including upgrading the ALARA program, represent a positive approach to correcting the identified problems.

Worker radiation exposures during this evaluation period were lower than the average for Region III pressurized water reactors; however, there were no major outages, which are significant contributors to worker exposures. Liquid radioactive releases were lower than the average for Region III pressurized water reactors; airborne radioactive releases were approximately average. Four Licensee Event Reports were initiated based on unplanned radioactive releases; neither the release quantities nor concentrations

exceeded regulatory limits. No radwaste transportation problems were identified during this evaluation period.

The licensee's performance for the Confirmatory Measurements sample comparison yielded 33 of 35 agreements. No problems were noted with the Licensee's analytical measurements program which includes QA/QC of analytical measurements.

The Environmental Protection inspection identified three items of noncompliance relating to environmental controls. The items were:

(1) A deficiency for failure to submit the 1979 Annual Nonradiological Environmental Monitoring Report within the specified time.

(2) A deficiency for failure to record required hourly recordings of water temperature prior to discharge to the lake.

(3) A deficiency for failure to include all of the required elements in the 1979 Nonradiological Environmental Monitoring Report.

The inspection determined that the licensee has a generic weakness in both the radiological and nonradiological monitoring program; namely, inadequate management controls to assure proper reporting of data due to apparent failure on the part of management to provide an effective review process. This contributed to all of the items of noncompliance above. As these all relate to records and reporting and not a failure to perform, the results were not significant.

b. Conclusion

The licensee is rated Category 2 in this area. Overall performance is considered improved from the previous SALP, but considerable NRC effort was required to obtain forward progress on some items of concern.

c. Board Recommendations

A special inspection to review the licensee's corrective actions for the Health Physics Appraisal findings should be conducted during the last half of 1981.

3. Maintenance

a. Analysis

Examination of this functional area involved parts of twelve inspections against the Technical Specifications and plant procedures. One noncompliance was identified as described below:

Infraction - a maintenance activity involving welding was being conducted without a continuous fire watch.

Management controls in the area of plant maintenance were undergoing change as a result of procedure improvements and implementation of a computer-based Periodic Activity Control (PAC) system for preventive maintenance. There was some program discontinuity experienced with changeover to the PAC system, relating to interfaces between the maintenance and plant operations departments.

There is a need (recognized by the licensee) for procedure improvements and expansion of procedure coverage in the area of corrective maintenance. Current procedures often reference vendor manuals; which may not be procedural in nature; which do not always provide specific information on the exact component model in service at Palisades; and control of which (for purposes of revision) is not in the hands of the licensee. Progress is being made in these areas.

Some backlog of outstanding maintenance needs developed over the SALP period, indicating a continuing need for more manpower or increased efficiency. The backlog situation for this operating cycle is, however, improved significantly from that experienced during previous similar cycles.

The frequency of component turnover from maintenance to operations with subsequent failed operability testing declined during this SALP period but some instances remained.

Three LER's relating to this area were caused by personnel errors. All these involved activities of construction maintenance personnel, not regular plant maintenance staff. The licensee increased instruction, planning and procedural controls for non-plant construction maintenance personnel to address these occurrences. One outstanding regulatory issue, relating to long-term "temporary" storage of maintenance records, was resolved by licensee action during the SALP period.

b. Conclusion

The licensee rated Category 2 in this area. While a number of minor weaknesses are evident, regulatory performance has not been adversely affected.

c. Board Recommendations

None.

4. Surveillance

a. Analysis

Two inspections were conducted by region based inspectors during the reporting period covering core physics and quality assurance aspects of this area. Technical Specifications, plant procedures, and 10 CFR 50, Appendix B were the bases for these inspections. Two Level V items of noncompliance were identified and are described below:

(1) Failure to use a meter with the required accuracy when conducting Technical Specifications surveillances.

(2) Improperly performed and documented surveillance test of the Steam Driven Auxiliary Feed Pump.

The inspections noted a lack of uniformity between departments in the new Periodic Activities Control Program for testing, similar to that noted for preventive maintenance. There were some data sheet recording problems such as calibration equipment not always being logged by the same identification numbers.

Parts of eleven inspections conducted by the resident inspectors examined this area during the appraisal period; using the Technical Specifications and plant procedures as the basis documents. Eight items of noncompliance were identified, six of which involved personnel errors or procedure violations which rendered safety equipment inoperable. The remaining two items involved reporting and recordkeeping. Five of the six significant items were identified in review of three events, as follows:

(1) On July 25-27, 1980, containment sump isolation valve CV-3030 was open while the plant was in operation, having been erroneously opened during a surveillance test. Safety injection, containment cooling, and containment isolation were degraded. (3 Infractions)

(2) On August 19, 1980, Safety Injection Refueling Water (SIRW) tank outlet valve CV-3031 was closed in performance of a surveillance test which should not have been performed with the plant in operation. (Infraction)

(3) On January 6, 1981, both station batteries were erroneously disconnected during performance of a test, disabling the vital electrical power system automatic features. (Level III)

Escalated enforcement action was taken for the first two events in the form of an Immediate Action Letter (IAL) dated July 31, 1980, a Civil Penalty in the amount of $16,000.00, and a local public meeting to review the problems and corrective actions on December 17, 1980. The IAL addressed training of operators, Shift

Technical Advisor shift rotation changes to improve control room surveillance, and implementation of a shiftwise verification of correct switch positions for all control room safety-related controls. These two events were addressed in the previous SALP; and the associated noncompliances were not considered in determining the current rating.

The third item was addressed in escalated enforcement in the form of an IAL dated January 9, 1981, and in a Confirmatory Order dated March 9, 1981. The IAL, which was subsequently incorporated into the Confirmatory Order, imposed daily corporate auditing of operations activities, a review of surveillance procedures, personnel reinstruction, complete separate verification of all safety system manipulations, and a review of the battery systems for addition of appropriate off-normal condition alarm circuitry. An expanded inspection program, focusing on proper system controls, was implemented by NRC Region III for several months, beginning with seven day per week coverage of at least parts of all three shifts for about two months. The augmented inspection was terminated at the end of the SALP period following five months of acceptable regulatory performance by the licensee.

The Confirmatory Order of March 9, 1981, included the following additional requirements: Limitations on operator overtime; establishment of a corporate level review of events caused by personnel errors or procedure deficiencies; and development of an action plan with specific milestones to address overall regulatory performance improvement. The last item was prepared and provided the basis for what is becoming a series of management meetings to review progress.

Three Licensee Event Reports (LER's) were identified relating to this area which were caused by personnel error (one event) or deficient procedures (two events). In addition, two of the personnel errors by operators assigned to functional area 1 (Operations) above, occurred during testing and are thus related to this area as well. Of these five events, four involved safety component inoperability and all but one of the five occurred in the first half of the SALP period.

Problems in maintaining safety component operability while completing required testing have continued from the previous SALP period. The problem causes, however, have shifted away from procedural deficiencies toward personnel failings; either errors or procedure nonadherence. Procedures were generally found to be satisfactory following significant overhauls completed during the previous SALP period. Continued effort was invested by the licensee to further improve procedures. The items noted during this SALP period which did relate to procedure deficiencies or procedure nonadherence usually involved a lack of personnel familiarity with procedures which were recently revised pursuant

to enforcement requirements of the previous SALP period. Such problems appeared to decline as personnel gained familiarity with the revised procedures.

Management control system strengthening as described under functional area 1 above also applies to this area. Thus, the strength of management controls improved during this SALP period.

b. Conclusion

The licensee is rated Category 3 in this area. A high level of management and NRC attention did not eliminate enforcement problems, though regulatory performance did improve over the course of the appraisal period. The complex and far-ranging nature of corrective actions undertaken in this area appeared to have a negative short-term effect on some aspects of regulatory performance.

c. Board Recommendations

Continued close and detailed review of performance and management controls in surveillance is recommended.

5. Fire Protection

a. Analysis

One inspection was performed by the regional inspection staff during this evaluation period. One noncompliance with regulatory requirements was identified during this inspection (Infraction: failure to follow established combustible material controls procedures for safety-related areas). The licensee promptly responded to this noncompliance and appeared to have a positive attitude toward fire protection.

This area was also routinely reviewed during plant and area tours by the assigned resident NRC inspectors. Improvements in overall cleanliness control, area accessability, and fire protection activities were observed during the appraisal period as a result of concentrated licensee attention and effort in these areas. The Resident Inspection Program identified one additional minor noncompliance (Category VI - improper flammable liquid storage) in review of this area of plant performance.

Assignment of a full-time property protection advisor indicated the licensee's positive attitude on fire protection. New activities involving independent equipment and job performance verification have been implemented.

Plant fire drills, observed on several occasions, resulted in timely and well organized response. This licensee provides a strong, clear presentation on plant fire protection requirements

as part of the training prerequisites for access to the site. Additional training is required for all permanent plant staff, including actual firefighting practice.

b. Conclusion

The licensee is rated Category 1 in this area.

c. Board Recommendations

The Board notes the licensee has not yet been inspected under the new Appendix R to 10 CFR 50 covering fire protection.

6. Emergency Preparedness

a. Analysis

Routine region based inspections were suspended in this area to conduct nationwide appraisals of the new emergency preparedness plans submitted under changes to 10 CFR 50, Appendix E.

Observations were made by the resident inspection staff covering routine fire drills and, more extensively, covering a major plant emergency exercise coordinated with offsite agencies which was held on December 9, 1980. No significant problems were noted in any of these observations. Licensee response was considered timely, comprehensive, and well coordinated. A critique following the exercise identified only minor items for followup action.

There was one item of noncompliance in this area for failure to meet the July 1, 1981, deadline for the early warning system and failure to inform the NRC the deadline would not be met. However, the licensee had progressed further than most licensees in Region III in the actual installation of the system. The licensee had asked to be allowed to install the early warning system over a smaller area than required by the rule. This request has been denied.

b. Conclusion

The licensee is rated Category 2 in this area.

c. Board Recommendations

The Board notes that an emergency preparedness appraisal was conducted subsequent to this SALP period. While problems requiring corrective action were identified, the number of such problems were fewer than average.

7. Security and Safeguards

a. Analysis

Two inspections were conducted by region based inspectors during the evaluation period. The resident inspectors made periodic tours of accessible protected and vital areas. Additionally, one investigation was conducted during the evaluation period, and another investigation was initiated. Two noncompliances were identified during this evaluation period. These noncompliances were:

(1) Severity Level V violation for inadequately securing a perimeter gate.

(2) Severity Level V violation because the bullet resistance of one security force structure was reduced.

A review of the previous SALP evaluation shows that the licensee has improved from the standpoint of reducing the number of security related noncompliances. However, problems related to guard force morale and frequency of allegations to the NRC still persist. Two investigations, one during this SALP period and the other just after the conslusion of this SALP period, have been initiated due to allegations made by members of the security force. The first investigation was based on allegations that an individual was granted access to Protected/Vital areas without completing the required security screening. No evidence was found to substantiate the allegation. The second investigation was based on allegations related to improper day-to-day security practices by members of the security force. The investigation results are being finalized. The licensee has been advised of concerns during the investigation and has conducted an extensive special audit/investigation addressing those concerns. The concerns pertained primarily to supervision of the contract security force and compliance with established procedures.

The effectiveness of one of the site perimeter intrusion detection systems continues to be an area of concern. The licensee has made little, if any, progress in the past 24 months in resolving technical problems which prevent the system from being fully operational. The system has been subjected to several modifications during the past two years. This issue has been forwarded to NRC Headquarters for review and resolution.

The licensee has an acceptable security management program with strong backing from corporate management. Day-to-day security supervision has indications of weaknesses but the licensee is aware of NRC concerns and is taking action to correct them. Security management at Corporate Level is aware of site security problems and offers aggressive support in resolving them.

The major safeguard tasks facing the licensee are the implementation of the security force Training and Qualification Plan and Safeguard Contingency Plan. Technical problems involving one of the perimeter alarm systems also need to be resolved.

b. Conclusion

The licensee is rated Category 2 in this area.

c. Board Recommendations

An increased inspection frequency is not recommended. A special inspection pertaining to supervision of the security force and compliance with established procedures should be conducted if improvement in these areas is not noted during routine inspections. Resolution of the adequacy of the licensee's perimeter intrusion alarm systems will also be closely monitored.

8. Refueling

a. Analysis

A limited inspection against Technical Specifications and procedure requirements was conducted since the plant was not refueled in the period. Preparations for refueling were reviewed in part by examination of new fuel receipt and inspection. No items of noncompliance were identified. Startup testing after the 1979 refueling was also reviewed briefly with no problems noted. One LER was noted (81-19) relating to a fuel vendor analytical error for the installed core load. Plant limits were not exceeded as a consequence of the error.

b. Conclusion

The licensee is rated Category 2 in this area.

c. Board Recommendations

None.

9. Licensing Activities

a. Analysis

The quality and timeliness of licensee responses to NRR issues varied with the perceived seriousness of the issue at hand. Telephone requests often needed repeated NRC followup, and completion of commitments made at meetings was poor. The licensee appeared negatively affected by manpower limits, though the technical capability of licensee staff was considered adequate.

Long-standing open items were left standing unless pursued by NRC. An exception to overall responsiveness was the comprehensive, detailed response to NUREG-0737.

Licensee staff working knowledge of regulations, guides, standards and generic issues is considered good. The licensee prepared well for meetings with NRR and was responsive to meeting questions but, as noted above, followup on meeting commitments was weak.

Licensee performance on Systematic Evaluation Program topics showed improvement through the SALP period. The licensee is locating a representative in Washington D. C. to assist in licensing issues.

b. Conclusion

The licensee is rated Category 3 in this area, based on overall responsiveness and apparent shortage of manpower.

c. Board Recommendations

None.

10. Quality Activities

a. Analysis

One inspection performed by region based inspectors and parts of two inspections performed by the resident inspection office covered audits, reviews and committees. The Technical Specifications, QA Manual, plant and corporate procedures, and 10 CFR 50, Appendix B formed the bases for these inspections. Two items of noncompliance were identified as follows:

(1) Level V - failure to complete QA audit program

(2) Level VI - timeliness of Plant Review Committee review of temporary procedure changes

The second item is an isolated instance, but the first item is significant because it is basic and programmatic in nature. Other Region III licensees have not omitted several of the eighteen criteria from their QA audit program, as was the case with Palisades. Four criteria were not audited at all. Qualified auditor staffing was insufficient, and management chose to address other activities to the detriment of audit program completion. Further, frustration on the part of QA staff was expressed regarding their inability to communicate findings to plant staff and to get what they considered timely and adequate corrective action.

A programmatic weakness noted in this area involves licensee provisions for deleting QC inspections (bypassing "hold points") on the basis of QC auditor availability rather than on the basis of quality requirements.

One inspection was performed by region based inspectors covering administration, QA records, and procurement. Most procedures and programs appeared adequate, but several minor noncompliances, considered indicative of inadequate procedural adherence, were noted as listed below.

(1) Level V procurement documents failing to reference applicable regulatory requirements

(2) Level V failure to write non-conforming Material Reports when required

(3) Level VI failure to store or maintain QA Records per ANSI N45.2.9.

(4) Level V failure to keep controlled drawings up-to-date

(5) Level V Various non-programmatic purchasing deficiencies

One inspection by region based inspectors and parts of ten inspections by the resident inspection office examined corrective action programs and reporting. The Technical Specifications, QA manual, and plant procedures formed the bases for the inspections. Two minor items of noncompliance were identified as follows:

(1) Level V - failure to initiate two required corrective action documents; and examples of overdue corrective actions

(2) Deficiency - reporting requirements for inoperable snubbers

As noted above, adequacy and timeliness of corrective action is a concern of the licensee's QA staff and the NRC Regional technical staff. Inability to resolve a number of already identified deficiencies formed part of the basis for the licensee's decision to conduct an incomplete audit program. One of the examples of overdue corrective action cited in the noncompliance above was an item originally identified by QA.

The licensee has a very ambitious, programmatically strong corrective action system, with a low threshold. Any member of the plant staff may initiate a Deviation Report. The facility initiates and processes on the order of 400 corrective action packages each year. Site management appears committed to the principles of their broad based, detailed program. On the other hand, the inspections noted poor understanding and little appreciation of the corrective action system on the part of many members of the plant staff. This probably contributed to

their reluctance to initiate corrective action paperwork (as may the licensee's tendency to assign corrective action evaluation back to the initiator).

Five items of noncompliance were identified in review of Licensee Event Reports. All related to improper actions during surveillance testing; so they are discussed under that functional area above and are so documented in Paragraph IV.4.a. The licensee program for identification of events reportable to NRC continues to be considered effective.

b. Conclusion

The licensee is rated Category 3 in this area. This is based on apparent management ineffectiveness in supporting QA program implementation and in dealing with QA findings; instances of quality procedure nonadherence; and widespread disenchantment at the working level regarding the corrective action program.

c. Board Recommendations

Close monitoring of the effectiveness and timeliness of licensee actions on problems identified in this area is warranted and should be initiated during the SALP III evaluation period.

V. SUPPORTING DATA AND SUMMARIES

A. Noncompliance Data

Facility Name: Palisades DOCKET NO: 50-255

Inspections No. 80-11 through No. 80-23

No. 81-01 through No. 81-11

Functional Areas	Noncompliances and Deviations									
	Severity Levels						Categories			
	I	II	III	IV	V	VI	Viol.	Infr.	Def.	Dev.
1. Plant Operations						1		4		
2. Radiological Controls					1			1	4	
3. Maintenance								1		
4. Surveillance			1		4			4	1	
5. Fire Protection						1		1		
6. Emergency Preparedness				1						
7. Security and Safeguards					2					
8. Refueling										
9. Licensing Activities										
10. Quality Programs					6	2			1	
TOTALS	0	0	1	1	13	4	0	11	6	0

B. Licensee Report Data

1. Licensee Event Reports

LER's No. 80-20 through No. 81-27

Licensee Proximate Cause Code Assignments:

Cause Type	Number LER's SALP 1	SALP 2
Personnel Error	7	8*
Design, Mfg., Constr./Install.	2	2
Defective Procedures	4	7
Component Failure	21	32**
Other	7	5
Total Number	41	54

*Two events included in both SALP periods due to overlap.
**Three events included in both SALP periods due to overlap.

Discussion:

This SALP period is characterized by a relatively high percentage of reportable events being caused by personnel errors or procedural deficiencies (28%), as was the case for the previous SALP period (27%). As noted in the functional area discussions above, most LER's with these causes occurred early in the period. Considering the time overlap between SALP 1 and SALP 2 for Palisades, and evaluating only those items not previously considered, the significance and frequency of "preventable" events declined through the SALP 2 period.

The total number of reportable events is increased from the SALP 1 period (54 vs. 41), primarily due to more frequent equipment failures (32 vs. 21); a parameter which did not decline through the period. The major categories of equipment failures were: instruments (8 failures, 5 in the second half); emergency power system and auxiliaries (6, 5 second half); and engineered safety features (6, 5 second half). This appears to be an adverse trend with respect to the physical condition of plant facilities, but the reason for this trend is not clear. This matter will be assessed further during the upcoming plant operating cycle.

2. Part 21 Reports: One Part 21 report (generated elsewhere) pertaining to high-density spent fuel storage rack swelling was closed at Palisades during the SALP period by completion and review of proper corrective action.

C. Licensee Activities

The Palisades plant engaged in routine power operations throughout the bulk of the SALP period. This included one continuous run at essentially full power for more than 170 days. Plant outages are summarized below.

1. July 2-10, 1980: manual trip following rupture of turbine oil filter housing. Selected CRDM seals were replaced. Spurious zero-power trip July 9.

2. August 26 - September 1, 1980: manual trip following trip of main condensate pump. Selected CRDM seals were replaced.

3. September 28, 1980: manual trip following short in turbine control circuit power supply.

4. October 9-10, 1980: automatic trip on loss of load.

5. October 31 - December 10, 1980: planned outage for turbine inspection and balancing, and fire protection system modifications. PCP seal replacement and containment isolation valve repairs were also performed based on needs identified in outage testing.

6. December 23-24, 1980: automatic trip followed spurious closure of turbine reheat intercept valves.

7. January 15-16, 1981: manual trip followed development of erratic feedwater control.

Administrative limitations on plant power were in effect in late August and in September 1980, based on NRC Immediate Action Letters (see Paragraph V.F.3 below) and concerns relative to water hammer and steam generator refill rate. Physical limitations related to circulating water system efficiency and resultant condenser backpressure were experienced during hot weather. A planned power reduction for condenser waterbox cleaning in June 1981, succeeded in considerably improving circulating water system efficiency. No major plant modifications occurred during this SALP period.

D. Inspection Activities

Two major "team" inspections were accomplished: The Health Physics Appraisal, encompassing some 400 inspection hours; and the Quality Assurance Appraisal encompassing 353 hours.

There has been a heavy overall inspection effort resulting from consideration of SALP 1 findings and from the augmented inspection program in early 1981 described in Paragraph IV.4.a above.

E. Investigations and Allegations Review

One investigation was conducted during this SALP period, to review allegations concerning improper authorization of unescorted access to the Palisades site. The allegations were not substantiated.

A special investigatory inspection was conducted to review the circumstances surrounding the licensee's report of finding safety-related valve CV-3030 mispositioned on July 28, 1980.

F. Escalated Enforcement Action

1. Civil Penalty

A civil penalty in the amount of $16,000.00 was imposed for license condition violations related to the mispositioning of safety-related valves CV-3030 and CV-3031.

2. Orders

One provision of an order dated November 9, 1979, remained in effect throughout the SALP period. This required monthly verification that all accessible valves and other controls in safety systems are properly positioned. The licensee completed and reported on all required verifications. No off-normal control conditions were identified.

A Confirmatory Order dated March 9, 1981, imposed conditions as described in Paragraph IV.4.a above, focusing on increased management controls in removal and return to service of safety-related components.

Compliance with both Orders was routinely verified by the resident inspection office.

3. Immediate Action Letters

a. July 31, 1980: Actions to correct and prevent repetition of containment sump valve CV-3030 misalignment.

b. August 15, 1980: Actions to complete items in NUREG-0578 relating to radiation monitoring instrumentation and procedures.

c. August 26, 1980: Prerequisites to startup relating to AFW pump operability and feedrate control; including a 55% power limit after startup.

d. September 4, 1980: Revised power limit of IAL dated August 26 to 83%. Subsequently, all restrictions on power level were removed.

e. January 9, 1981: Actions to correct and prevent repetition of event involving erroneous opening of both station battery output breakers, or similar events.

The first three of the above IAL's were addressed in the previous SALP. Compliance with all IAL provisions was verified by the resident inspection office.

G. Management Conferences

1. November 24, 1980, (Jackson, Michigan): Discussion of initial SALP program and findings.

2. December 17, 1980, (South Haven, Michigan): Review of licensee actions to correct and prevent recurrence of events such as the mispositionings of valves CV-3030 and 3031 - in a public forum.

3. February 18, 1981, (Glen Ellyn, Illinois): Discussion of licensee program for improvement of regulatory performance-program development.

4. March 18, 1981, (Glen Ellyn, Illinois): Discussion of licensee program for improvement of regulatory performance-program implementation.

5. May 12, 1981, (Glen Ellyn, Illinois): Same as (4) above.