

SALP BOARD REPORT

U. S. NUCLEAR REGULATORY COMMISSION
REGION III

SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

50-440/86001
Inspection Report

Cleveland Electric Illuminating Company
Name of Licensee

Perry Nuclear Power Plant, Unit 1
Name of Facility

July 1, 1985 through April 30, 1986
Assessment Period

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PDR ADOCK 05000440
Q PDR

I. INTRODUCTION

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

An NRC SALP Board, composed of staff members listed below, met on June 20, 1986, to review the collection of performance observations and data to assess the licensee's performance in accordance with the guidance in NRC Manual Chapter 0516, "Systematic Assessment of Licensee Performance." A summary of the guidance and evaluation criteria is provided in Section II of this report.

This report is the SALP Board's assessment of the licensee's safety performance at Perry Unit 1 for the period July 1, 1985, through April 30, 1986.

SALP Board for Perry 1 :

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II. CRITERIA

Licensee performance is assessed in selected functional areas, depending upon whether the facility is in a construction, preoperational, or operating phase. Functional areas normally represent areas significant to nuclear safety and the environment. Some functional areas may not be assessed because of little or no licensee activities, or lack of meaningful observations. Special areas may be added to highlight significant observations.

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

1. Management involvement and control in assuring quality.
2. Approach to the resolution of technical issues from a safety standpoint.
3. Responsiveness to NRC initiatives.
4. Enforcement history.
5. Operational and Construction events (including response to, analysis of, and corrective actions for).
6. Staffing (including management).

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 definitions of these performance categories are:

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

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

III. SUMMARY OF RESULTS

Overall, the licensee's performance was found to be acceptable. The licensee was found to have aggressive management attention and a high level of performance in the assessment areas of Electrical Power and Instrumentation and Control Systems, Licensing Activities, Emergency Preparedness, and Security. All other assessment areas were found to be adequate and represented a licensee management team that was sufficiently staffed and appropriately involved and concerned with nuclear safety. The highly transitional stage that the plant is undergoing as it moves from construction and preoperational testing to low power testing and eventual full power operation will require increased management attention. Management involvement in assuring safe operation must continue to be present with a particularly keen sense of awareness of weaknesses that are identified through implementation of their operational program.

<u>Functional Area</u>	<u>Rating Last Period</u>	<u>Rating This Period</u>
A. Containment and Other Safety-Related Structures	1	NR
B. Piping Systems and Supports	2	2
C. Heating, Ventilating, and Air Conditioning (HVAC)	NR	NR
D. Electrical Power and Instrumentation and Control Systems	NR*	1
E. Quality Programs and Administrative Controls Affecting Quality	2	2
F. Licensing Activities	2	1
G. Preoperational Testing	3	2
H. Startup Testing	NR	NR
I. Radiological Controls	2	2
J. Fire Protection	2	2
K. Emergency Preparedness	1	1

L.	Security	2	1
M.	Maintenance/Modifications	NR	2
N.	Surveillance and Inservice Testing	NR	2
O.	Fueling	NR	2
P.	Operational Readiness/Plant Operations	NR**	2
Q.	Training and Qualification Effectiveness	NR	2

*The licensee was rated in the two areas separately during the last assessment period. A Category 2 was given for Electrical Power and a Category 1 was given for Instrument and Control Systems.

**The licensee was rated a Category 2 in Operational Readiness during the previous assessment period but not rated in Plant Operations.

NR = Not Rated

IV. PERFORMANCE ANALYSIS

A. Containment and Other Safety-Related Structures

1. Analysis

The work activities in this functional area are essentially complete. Inspection activities by Region III inspectors were limited to portions of seven inspections. Areas examined included a review of activities related to the drywell structural integrity test (SIT), structural steel as-built drawing verifications, and allegations concerning the misapplication of coatings in the containment, containment liner weld quality, voids in bioshield concrete, fuel transfer pool integrity, Polar Crane box girder weld quality and containment piping penetration seal defects.

For the areas examined, the inspectors determined that activities were generally controlled through the use of well stated and defined procedures. The approach used to conduct the SIT was generally conservative, technically sound, and thorough. Records were found to be generally complete, well maintained, and available. Inspections into the concerns contained in the allegations did not disclose any issues for which the licensee had not already taken suitable corrective actions. No violations or deviations were identified.

2. Conclusions

Due to the limited inspection activities performed in this area, the licensee was not rated. The licensee received a rating of Category 1 during the last SALP period.

3. Board Recommendations

None.

B. Piping Systems and Supports

1. Analysis

The inspection activities in this area were, for the most part, limited to observation of completed work and a selected review of records because construction was essentially complete at the beginning of the assessment period. Examination of this functional area consisted of portions of ten inspections by Region III inspectors. Areas examined included (1) visual examination of selected piping welds and piping spools; (2) review of radiographs and related reports for selected field welds; (3) testing of pipe support and restraint systems; (4) the inadvertent overpressurization of some non safety-related

High Pressure Core Spray pump test return line piping during system vibration testing; (5) review of selected licensee "Call for Quality" investigations and engineering technical evaluations; (6) examination and field walkdowns of selected as-built safety-related piping systems and supports; and (7) licensee actions related to previous inspection findings, IE Bulletins, IE Circulars, IE Information Notices, and 10 CFR 50.55(e) deficiency reports.

One Severity Level IV violation was identified for failure to adequately control the design of pipe supports. The licensee's written response and implementation of corrective actions were reviewed and found to be acceptable. This violation is not repetitive of violations identified during the previous assessment period and it did not appear to have generic or programmatic implications (Inspection Report 50-440/85016).

For the areas examined, the inspectors determined that activities were generally controlled through the use of well stated and defined procedures. Visual observations indicate personnel had an adequate understanding of work practices and that procedures were generally adhered to. The licensee's actions in response to previous inspection findings, NRC initiatives, 10 CFR 50.55(e) deficiency reports, were generally timely, thorough, and technically sound. With the exception noted above, the control of design was viable, generally sound, and thorough. Their approach used to evaluate and analyze piping system vibration and thermal expansion preoperational testing was generally conservative, technically sound, and thorough. The "Call for Quality" investigations and resulting technical evaluations were technically sound and acceptable resolutions were generally implemented. Records were found to be generally complete, well maintained, and available.

2. Conclusions

The licensee is rated Category 2 in this area. The licensee received a rating of Category 2 in the last SALP period.

3. Board Recommendations

None.

C. Heating, Ventilating, and Air Conditioning (HVAC)

1. Analysis

Examination of this functional area consisted of one inspection during which the Region III inspector reviewed the HVAC contractors installation activities. Areas examined included (1) a review of the design specification and applicable installation and quality control procedures; (2) a review of certification and qualification records for selected QC technicians (inspectors) and welders; (3) a walkdown of portions of selected systems which included examination of installations for conformance to design drawings, fabrication sketches and duct installation procedures, and (4) a review of selected installation packages and testing records.

For the areas examined, the inspector concluded that activities were generally controlled through the use of well stated and defined procedures. Observations of HVAC activities indicate the personnel had an adequate understanding of work practices and that procedures and drawings were adhered to. Records were found to be generally complete, well maintained, and available. The records also indicated that personnel performing welding and QC inspection activities were trained and certified. No violations or deviations were identified.

2. Conclusions

Due to the limited inspection activities performed in this area, the licensee was not rated. The licensee was not assessed in this area during the last SALP period.

3. Board Recommendations

None.

D. Electrical Power and Instrument and Control Systems

1. Analysis

The examination of this functional area included portions of 25 inspections by Region III inspectors. The inspections included (1) examination of control of activities involving the installation of materials and components including direct inspection of in-process and completed work; (2) walkdown inspection of instrumentation systems and electrical circuits; (3) review of welding processes; (4) inspection of instrument and electrical cable terminations; (5) examination of quality

assurance records including equipment and materials qualification; (6) as-built drawing verification; and (7) examination of quality control activities. No violations of NRC requirements or deviations from commitments were identified in this functional area.

The inspectors identified no programmatic or procedural weaknesses in this functional area during the appraisal period. With one minor exception, issues identified by the inspectors and/or licensee were promptly and adequately resolved. The single exception involved incomplete evaluation of susceptibility of installed plant instrumentation to radio frequency interference as recommended by IE Information Notice 80-09. Once this matter was brought to the licensee's attention, additional actions were implemented in a thorough manner and resolution was achieved prior to operating license issuance. Significant deficiencies were promptly reported in accordance with 10 CFR 50.55(e). Analyses were thorough and included comprehensive corrective actions.

The Perry construction quality assurance organization was adequately staffed with well qualified personnel as demonstrated by the quality of their overview inspections, surveillances, audits of contractor activities, and their responsiveness to regulatory issues. The inspections, surveillances, and audits were timely, thorough, and in-depth to determine the root cause(s) of identified problems. Corrective actions were timely and directed toward preventing the recurrence of problems.

Management involvement in assuring a high degree of quality was evident throughout the assessment period. An example of this was reflected in their final inspections/walkdowns of systems prior to turnover. These activities were found to be thorough and served to prevent the carry over of construction deficiencies into the testing and operating phases of the plant. In addition, outstanding licensee performance was evident from the lack of violations or deviations issued during this rating period and the quality of the overview provided by the licensee's quality assurance organization.

2. Conclusions

The licensee is rated a Category 1 in this area. The licensee was rated separately a Category 1 in Instrument and Control Systems and a Category 2 in Electrical Power Supply and Distribution during the previous assessment period.

3. Board Recommendations

None.

E. Quality Programs and Administrative Controls Affecting Quality

1. Analysis

One region based inspection was performed to determine the adequacy of the Operational Quality Assurance Program in the following areas: safety committee activities; tests and experiments; operating staff training; surveillance testing; and calibration control. No violations or deviations were identified.

Another region based inspection consisted of an NRC Augmented Investigation Team (AIT) and a support team walkdown inspection following the January 31, 1986, earthquake to determine its effect on the Perry plant.

Following the January 31, 1986, earthquake, a Confirmatory Action letter (CAL-RIII-86-01) was issued on January 31, 1986, to document an agreement to maintain all affected equipment in the "as found" condition until the NRC AIT could jointly with the licensee evaluate any evidence to determine the effects of this event. The AIT inspection included confirmation of the data gathered by the Perry staff during their plant walkdowns, the review and the validation of the data captured by the plant's seismic instruments, and conduct of a detailed inspection of selected safety-related systems including piping and associated mechanical and electrical support systems.

Based on AIT observations, it was determined that activities were generally controlled through the use of well stated and defined procedures and that personnel demonstrated a general understanding of the actions required to respond to an off-normal event. The licensee's approach to evaluating the event was conservative, technically sound, and thorough. The licensee's actions in response to the CAL were prompt and effective. Records were found to be complete and reasonable steps were taken to preserve and validate the data.

Considerable resident inspection effort was expended to examine licensee activities in this functional area in the course of fourteen inspections. This inspection effort focused upon (1) development and staffing of the plant operating organization; (2) development and implementation of administrative procedures required for plant operation; (3) implementation of administrative controls for the tracking and resolution of outstanding construction items and establishment of equipment operability; (4) independent review programs; (5) procedures and activities addressing housekeeping and care and preservation of safety related components; (6) implementation of the licensee's program for the handling of employee concerns and

allegations; (7) review and investigation of allegations dealing with employee fitness for duty; (8) development and implementation of the licensee's program for the tracking and resolution of NRC inspector-identified items; (9) the licensee's program for performing evaluations required by 10 CFR 50.59; and (10) the processing of FSAR changes prior to operating license issuance.

Two violations were identified, as follows:

- a. Severity Level IV - failure to establish and implement adequate administrative controls for housekeeping and material control (Inspection Report 50-440/86006).
- b. Severity Level IV - failure to develop and implement adequate procedures for establishing and documenting the operating status of plant instruments (Inspection Report 50-440/86008).

The housekeeping violation resulted following a turnover of housekeeping responsibilities from the construction organization to the operating organization. Corrective actions in response to earlier violations involving housekeeping were not adequately translated into the administrative procedures governing housekeeping for the facility operating phase. Licensee response to this violation was prompt and thorough. Interim and permanent corrective actions taken included training of responsible personnel to revised administrative procedures.

The violation concerning plant instruments represented a breakdown in administrative controls which, had it gone undetected, would have seriously threatened the operability of a number of safety related instruments. Following identification of this deficiency by the licensee, a program of corrective action was formulated in consultation with NRC Region III management. This program was formally submitted to the NRC and incorporated as a condition of the Perry operating license. Followup inspections by the resident inspectors confirmed, prior to fuel load and initial criticality, that required portions of the corrective action program were acceptably completed. Licensee actions in response to this matter were generally timely and thorough; however, the corrective action plan initially formulated by the licensee was deficient in a number of respects. It did not include evaluation of the effects of mispositioned instrument valves on preoperational and surveillance test results nor did it include review to determine if instrument valves were mispositioned by unauthorized personnel (i.e. tampering). Finally, the schedule for providing valve identification tags was untimely. Following discussions among

the licensee, Region III management, and inspection personnel, the deficiencies were resolved and incorporated into the licensee's formal submittal.

The significance of this matter was mitigated by the fact that a licensee initiative to assess operational readiness had identified the problems and corrective actions were accomplished before plant operating conditions required operability of affected instruments.

Throughout the assessment period licensee management involvement in the implementation of quality programs and administrative controls has been highly visible. This involvement was evidenced by the establishment of a formal and comprehensive program for the completion of plant licensing, construction, testing, and operational program development activities. The program was well formulated and provided a high level of assurance that these activities were completed in a thorough and timely manner to support plant operations.

By management direction, operational administrative controls and procedures were implemented on November 1, 1985. This has proven to be invaluable in that it resulted in the early detection of programmatic weaknesses, inconsistencies and areas where additional personnel training was needed. By the time of operating license issuance, the licensee had demonstrated the capability to implement a viable system of operational programs and administrative controls to support plant operations.

Throughout the assessment period the licensee exhibited a high level of responsiveness to NRC identified concerns and their resolution of technical issues were generally found to be adequate. This was evidenced by numerous refinements to operational programs and procedures, enhanced personnel training, and self assessments of operational readiness conducted to resolve NRC identified weaknesses. Staffing was found to be ample and well trained.

In summary, quality programs and administrative controls affecting quality were determined to be adequate and acceptably implemented throughout the difficult pre-licensing and initial operations phases included in this assessment period.

2. Conclusion

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

3. Board Recommendations

None.

F. Licensing Activities

1. Analysis

Evaluation of the licensee's performance for this rating period was predicated on how the licensee fared in the areas of management involvement and control in assuring quality; how the licensee approached the resolution of technical issues; the licensee's responsiveness to NRC initiatives; and project staffing in the emergency planning, licensing, and plant operating organizations.

During this review period, the licensee's management demonstrated an active participation and thorough working knowledge of the technical issues involved in licensing activities, and has kept abreast of current and anticipated NRR licensing actions. This was especially evident by actions taken by the licensee's management in directing his staff to ensure that the physical plant was designed and built in conformance with regulatory requirements, and in the finalization of plant technical specifications. With respect to the NRC technical concerns over the use of silicone sealants on HVAC ductwork, it is the staff's opinion that the licensee's management enabled its technical personnel to institute a comprehensive testing program to address long-standing generic NRC staff concerns relative to the integrity of silicone sealants used in HVAC ductwork under postulated accident environmental conditions. This testing program is unique in the industry and has the potential for solving this long-standing generic issue. More recently, the licensee's management direction and direct involvement in assessing the effects of the 1986 Ohio earthquake on the plant design, as well as in the re-review of the site area geology/seismology design bases, was instrumental in obtaining the Perry Unit 1 low power operating license in March 1986. Weaknesses reported for the last SALP period in the area of the licensee's management involvement and control in assuring quality with respect to plant test and plant operation organizational interfaces, control and overview of FSAR amendments, the oversight of in-house and Architect Engineer engineering work to preclude deficiencies found during the Independent Design Inspection (IDI) Team audit of the licensee's technical documentation file, and the workload problems in the Licensing organization which resulted in missed commitments, have all been corrected to the NRR staff's satisfaction. On being notified of these performance weaknesses, the licensee's senior management took prompt remedial action and instituted more rigorous controls and made personnel changes which corrected problems in the oversight of engineering work and organizational interfaces.

The licensee's understanding of technical issues, which needed to be resolved prior to obtaining an operating license for Perry 1, and their approach to resolving technical issues was found to be thorough and competent. Performance of the licensee's technical staff was better than average in addressing such difficult SER open issues as: reliability of TDI diesel engines; the detailed control room design review; Reactor Coolant Pressure Boundary (RCPB) leak detection design; Mark III (Humphrey) containment design issues; completion of the fire protection program; use of silicone sealant in HVAC ductwork; post accident sampling system design; and the completion of plant equipment seismic/dynamic qualifications. It is particularly noted that the work performed by the licensee contributed to making Perry the only Mark III plant to date which has satisfactorily resolved every containment design issue, alleged by John Humphrey (a former GE engineer) at the time the initial SER was issued in May 1982.

Responsiveness to NRC initiatives has been most satisfactory in that the licensee is always ready to meet with the staff (often generating meetings themselves) to ensure a correct response to NRC needs. Examples of this were most evident from the licensee's performance in the resolution of the technical issue discussed above, responding to TMI Action Items, requests for additional information, and NRC Generic Letters during this performance appraisal period.

The licensee's staffing for the operation of Perry 1 is considered by NRR to be qualified and adequate for Perry 1 operation. At the time of Perry 1 licensing, there was a sufficient number of licensed SROs, ROs, and STAs to man six operating shifts. The licensee has chosen to operate the facility with four rotating shifts throughout the startup test program. The licensee's plan to have every General Engineering Supervisor licensed as SROs as a matter of policy is a distinctive plus.

An inspection was performed by region based personnel to determine the level of consistency and compatibility between plant Technical Specifications (DRAFT), Final Safety Analysis Report (FSAR), Safety Evaluation Report (SER), as-built configurations, surveillance requirements, and preoperational test acceptance criteria. The inspection revealed no violations of NRC requirements and documents reviewed exhibited a high degree of consistency.

2. Conclusions

An overall Category 1 rating is assigned for the licensee's performance for this rating period. The licensee was rated Category 2 in this area during the previous assessment period.

3. Board Recommendations

None.

G. Preoperational Testing

1. Analysis

During this assessment period six inspections were performed in this functional area. The inspection effort included: (1) review of administrative controls and implementing procedures; (2) detailed reviews of preoperational test procedures and results; (3) preoperational test witnessing; (4) verifications of preoperational test procedures and results; (5) independent inspection; and (6) followup of previous inspection items.

Six violations were identified as follows:

- a. Severity Level IV - Preoperational Test Procedures TP 1C71-P001, "Reactor Protection System (RPS)" and TP 1C71-P002, "Reactor Protection System Motor-Generator Sets" were inadequate because they did not adequately test design features. Preoperational Test Procedure TP 1M51-P001, "Combustible Gas Control System" was inadequate because it was inconsistent with the licensee's administrative requirements (Inspection Report No. 50-440/85042).
- b. Severity Level IV - Inadequate measures to ensure that the System Test Engineer is aware of the status of his system with respect to temporary alterations while undergoing testing (Inspection Report No. 50-440/85042).
- c. Severity Level V - Inadequate measures to indicate jurisdictional status of equipment in the control room (Inspection Report No. 50-440/85042).
- d. Severity Level IV - Preoperational Test Procedure TP 1P57-P001, "Safety-Related Instrument Air," was determined to be inadequate for not properly controlling the sequence of testing (Inspection Report No. 50-440/85053).

- e. Severity Level IV - Testing was not accomplished in accordance with applicable procedure requirements for TP 1R76-P001, "ECCS Initiation/Loss of Offsite Power," TP 1C71-P001, "Reactor Protection System," and TP 1M51-P001, "Combustible Gas Control System" (Inspection Report No. 50-440/85053).
- f. Severity Level V - Resolutions of failures to meet acceptance criteria in Preoperational Test Procedures TP 1G43-P001, "Suppression Pool Makeup (SPMU) System" and TP 1C71-P002, "RPS Motor Generator Sets" represent inadequate documentation and evaluation to assure test requirements had been satisfied (Inspection Report No. 50-440/85081).

These violations can be categorized into four general areas of (1) inadequate administrative controls, (2) inadequate documentation and evaluation of failures to meet acceptance criteria, (3) inadequate test procedures and (4) failure to follow procedures.

The identified violations are in either random areas or areas of the test program that have been corrected before the end of this assessment period, and therefore do not appear to indicate any significant problems.

As a result of 13 violations identified in the previous 18 month SALP period, a management meeting was conducted on June 3, 1985, to discuss NRC concerns. The licensee was very responsive to NRC initiatives and implemented aggressive corrective actions to address those concerns. The licensee exhibited increased initiative in identifying and implementing self-imposed corrective actions. The effectiveness of those actions was evaluated during this assessment period and found to satisfactorily remedy the concerns. Five of the six violations identified in this SALP period were identified in the first three months of the period. These were primarily attributable to causes which actually occurred prior to the management meeting or prior to complete implementation of the resulting corrective actions. Therefore, the six violations of this 10 month SALP period represent a substantial reduction in both frequency and significance from the 13 violations of the previous 18 month SALP period.

The licensee displayed evidence of prior planning and assignment of priorities by forming a Management Procedure Review Team (MPRT) to determine the extent of the problems and to present recommendations for corrective actions, in that the MPRT was well staffed technically and received upper management support. Corporate management was involved with the creation,

recommendations, and other activities of the MPRT which ensured adequate management review of site activities. Personnel appeared to understand and be operating in compliance with adequately stated policy.

In implementing the MPRT recommendations, the licensee developed Special Project Plan 1102, "Test Procedure Assurance Review." This plan ensured preoperational test procedure adequacy by providing a generally sound review of all preoperational and selected acceptance test procedures. The plan's reinforcement of attention to detail to ensure technical adequacy of test procedures was found to be effective.

At the time of the NRC review, the preoperational test procedures TP 1C71-P001, TP 1C71-P002 and TP 1M51-P001 had not yet received the MPRT additional review, therefore, violation a. does not reflect on the corrective actions. The sequencing problem of Violation d. identified in TP 1P57-P001 (a post-MPRT-reviewed procedure) probably would have been corrected during performance of the test and was the only procedure inadequacy identified in a post-MPRT-reviewed procedure. Generally, the procedure review seemed to have prevented recurrence of any procedure inadequacies due to omission of design feature testing. The plan was eventually effective in preventing failures to follow procedures by increased supervisory involvement during the evolution and conduct of test procedures and revisions and additional training for test personnel. The failure to follow procedures documented in Violation e. occurred in the first three months of this assessment period. No recurrences were identified in the subsequent months and it appears the corrective actions of additional training finally became effective. Violations b. and c. document failure to meet administrative controls that occurred before the corrective actions of June 3, 1985, became effective. There were no subsequent administrative requirement violations identified in the following 11 months; therefore, the corrective actions appear effective. The re-review of licensee requirements was effective because no omissions of required testing were identified subsequent to MPRT review. Generally the licensee was very responsive to NRC initiatives and the corrective actions took a long time to manifest their effectiveness only because of the vast amount of work undertaken by the licensee to ensure preoperational test program adequacy. Therefore, in that context, the corrective actions were generally timely and effective.

The licensee generally understood technical issues exhibiting conservatism in the resolution of approximately 2000 problems encountered during testing commonly called test exceptions. Violation f. documented only two test exceptions that were inadequately resolved. Licensee management adequately resolved

those after citation. Based upon the large sample determined to be adequate, these are considered isolated occurrences and represent no significant problem.

Occasional significant construction events attributable to causes under the licensee's control, have occurred that are relevant to preoperational testing but they were reported and analyzed properly.

Staffing, including management, appears adequate.

2. Conclusions

The licensee is rated Category 2 in this area. This is an improvement from the previous SALP period rating of Category 3. The improvement is largely attributable to the effective management initiatives taken by the licensee following the June 3, 1985, management meeting with the NRC.

3. Board Recommendations

None.

H. Startup Testing

1. Analysis

Region based inspectors performed three inspections in this functional area. The inspection effort included overall startup test program review and startup test procedure review. There have been no violations identified in this area. The inspections showed that the overall program is comprehensive and adequate. In addition, the startup test procedures are adequate in meeting administrative requirements and regulatory commitments and exemplify good technical methodology. The inspectors feel that overall the procedures for control of activities were well stated, controlled, and explicit.

The licensee has proved to be responsive to NRC initiatives in that an additional final review by quality assurance was provided to ensure correction of some minor procedural problems and prevent recurrence. All startup test procedures are to be revised under this modified review process prior to their actual use. The licensee was not rated in this functional area during the previous SALP assessment period because of no work being done in this area. Inspections in this assessment period have covered a limited portion of this functional area.

2. Conclusions

No rating is recommended in this area due to limited licensee and inspection activity. The licensee was not assessed in this area during the previous SALP period.

3. Board Recommendations

None.

I. Radiological Controls

1. Analysis

Five preoperational inspections were conducted during the assessment period. These inspections covered radiation protection, radwaste, chemistry, confirmatory measurements, and environmental monitoring. No violations were identified.

The licensee has satisfactorily completed activities essential to load fuel. Organization, staffing, and training meet FSAR requirements. Capabilities of staff and technicians were judged adequate to proceed with fuel load and startup, and the qualified staff is large enough to provide coverage on all shifts. The licensee is seeking to retain a qualified chemistry consultant to assist the Plant Chemist during early plant operation in accordance with their commitments. Facilities and equipment for health physics and chemistry were generally satisfactory.

Overcrowded office space identified in the previous SALP was alleviated and now appears adequate. Laboratory and counting room instruments are of good quality, adequate to perform the required analyses, and have been calibrated in accordance with approved procedures. The licensee established a water chemistry control program addressing the important elements presented in the BWR Owners Group guidelines with provision for monitoring and trending important parameters and for suitable administrative limits. The licensee has agreed to issue a corporate policy on water chemistry control within six months after issuance of the fuel load license. The licensee also completed the preoperational requirements for the Radiological Environmental Monitoring Program (REMP) and demonstrated satisfactory capability in performing analyses of radiological samples. Management involvement in these areas has been evident during the assessment period.

Adequate management involvement and technical issue resolution has been exhibited by the licensee in assigning priorities for completing critical preoperational activities and documenting necessary deferrals. Several activities, not essential for fuel loading, have been deferred with appropriate schedule priorities. These activities include: testing and correction of deviations for the liquid radwaste processing, solid radwaste, and offgas systems, which were deferred until initial criticality; operability of the Post Accident High Range Radiation Monitoring System, which has been deferred to five percent power; investigation of use of silicone sealant on certain HVAC systems and representativeness of gaseous effluent sampling systems, which are scheduled for resolution by the first refueling outage; work on the Turbine Plant Sampling System (TPSS), including replacement of extraction pumps and calibration of dissolved oxygen monitors, which is scheduled for completion by turbine roll; and completion of a small tool decontamination and storage facility, tentatively scheduled for mid-1986.

Management responsiveness and resolution of NRC identified technical issues were adequate during this assessment period. The licensee's initiation of a program to test silicone sealants used in HVAC ductwork under postulated accident environmental conditions is an example of good responsiveness. Conversely, weaknesses are evident in laboratory Quality Control (QC) where the program for testing of technician proficiency with unknowns is limited to analyses required by technical specifications; not included are sulfate, fluoride, silica, and copper which are important for chemical control and recommended by the BWR Owners Group. The licensee has been reluctant to make specific commitments for improvements in laboratory QC but has indicated a willingness to extend the scope of the QC program at a later time. The licensee's policy and plans for a quality assurance audit program for radiological controls appears adequate.

2. Conclusions

The licensee is rated Category 2 in this area. This is the same rating as the previous assessment period.

3. Board Recommendations

None.

J. Fire Protection

1. Analysis

During this assessment period, two inspections by Region III based inspectors and their consultants were performed to determine the status of outstanding fire protection issues including a continuing assessment of the licensee's fire protection program implementation and a review of allegations received by the NRC relative to penetration seals. No violations or deviations from NRC guidelines or other commitments were identified during these two inspection visits.

Based on these two regional inspections, it was determined that the licensee was continuing to make satisfactory progress in implementing the applicable fire protection requirements and the fire protection preoperational test program. The outstanding items remaining open from the initial fire protection team inspection (Inspection Report 440/85015), discussed during the last assessment period, were all addressed adequately by the licensee's staff and the majority closed out in these two inspection reports.

A review of three allegations concerning penetration seals was completed. They were closed based on supporting test data and the technical adequacy of procedures including an in-office review of certain information provided by the licensee.

Management was found to be sufficiently involved in this functional area as evident by the licensee's responsiveness in addressing the inspectors' outstanding items. Staffing appeared to be adequate and personnel were found to be knowledgeable and well trained.

2. Conclusions

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

3. Board Recommendations

None.

K. Emergency Preparedness

1. Analysis

Four inspections were conducted during the assessment period to evaluate the licensee's performance with regard to emergency preparedness. These included a followup inspection to the Emergency Preparedness Implementation Appraisal (EPIA) to

assess the progress in addressing NRC concerns raised as a result of the EPIA; observation of the annual emergency preparedness exercise in 1985; an inspection to assess the actions associated with the activation of the Emergency Plan as a result of a January 31, 1986, earthquake; and an inspection of the 1986 annual exercise. No violations or deviations were identified during the SALP period. No weaknesses were identified during the 1985 annual exercise; no additional NRC concerns were raised during the followup to the EPIA; only two NRC concerns were tracked as open items as a result of the licensee's performance in regards to activating their Emergency Plan due to the earthquake.

The scenario for the 1986 exercise was considered challenging and difficult, and adequately exercised all aspects of the Emergency Plan. While three Open Items were identified as a result of this exercise, the items were considered minor.

In almost all cases, the licensee has been responsive to NRC concerns by providing viable, sound, and thorough responses in a timely manner. When resolving weaknesses from a safety standpoint, the licensee has demonstrated a clear understanding of the issues involved.

Management involvement in emergency preparedness has been very strong as evidenced by their participation in the exit meetings following each inspection, and their timeliness in addressing NRC concerns.

Staffing of key emergency response positions has been adequate, with the authorities and responsibilities of personnel well identified. Knowledge and capability of personnel to carry out their assigned emergency response duties and responsibilities was demonstrated during both annual emergency preparedness exercises and the actual activation of the Emergency Plan due to the earthquake. The licensee's performance related to these two items is indicative of an effective training program that has adequately prepared personnel to carry out their emergency response assignments.

2. Conclusions

The licensee is rated Category 1 in this area, and was also rated a Category 1 in this area in the last SALP period.

3. Board Recommendations

None.

L. Security

1. Analysis

Four preoperational safeguards inspections were conducted by regional based inspectors during the assessment period and one routine safeguard startup inspection was performed subsequent to the assessment period to determine the licensee's progress in implementing the security program. The resident inspectors also made periodic inspections of security activities, and assessed routine program implementation.

One Severity Level IV violation was identified subsequent to the assessment period because portions of the licensee's vital area barriers were found unsecured (Inspection Report 50-440/86013). The licensee's immediate actions resolved the issue and a written response to the violations was not required.

This violation is not included in Paragraph V.B.1, Table 1, of this report, but is addressed here because it reflects on performance during this assessment period.

The licensee's Physical Security Plan, Safeguards Contingency Plan, and Training and Qualification Plan became effective on March 18, 1986, upon issuance of their operating license. Therefore, no violations were cited during the preoperational security inspections. During the preoperational inspections, numerous items were identified and were satisfactorily corrected and/or resolved prior to issuance of the operating license. The licensee has been very responsive to the concerns identified by the NRC and extremely aggressive in self-identifying and correcting problems.

During the preoperational phase in anticipation of initial activation of the security program needed prior to license issuance, the licensee requested and received an extensive security audit conducted by the security managers from nuclear plants of another large Region III utility which assisted in establishing priorities for implementation and problem areas.

The licensee's preoperational planning and scheduling program was aggressive and proved effective, and as a result, all preoperational inspection findings/concerns were resolved prior to licensing.

The licensee's senior management appears to have an awareness of security issues and are effective and responsive to resolving security issues as demonstrated by the extensive

resources devoted to completion of the background screening program. The senior security personnel represent broad technical disciplines, have a high degree of expertise, and have been effective in identifying problem areas and recommending solutions. Concerns and observations receive the same exceptionally high level of management attention normally associated with violations. The security management is responsive to all findings that can strengthen their program, rather than concentrating on just minimum compliance required by the security plan.

The licensee's staffing levels appear adequate to fulfill security plan commitments. There have been no licensee reports of Safeguards events and no known events that would require a report. The licensee is fully aware of the reporting requirements and the importance of timely and detailed reports.

The licensee's training and qualification program is well defined and implemented with dedicated resources which make a positive contribution to overall implementation of the security program. Understanding of and adherence to procedures resulted in few personnel errors during the rating period.

The site Quality Assurance (QA) Department, which lacked experience in the security field, will have to demonstrate through involvement in site security activities, that they can effectively audit the security program, and identify security weaknesses.

In summary, the licensee's security staff has been effective in the planning and implementation of the security program. The security staffing is adequate and departmental support for the security program has been effective.

2. Conclusions

The licensee is rated a Category 1 in this area. The licensee was rated Category 2 in this area during the previous assessment period.

3. Board Recommendations

None.

M. Maintenance/Modifications

1. Analysis

The operational maintenance program was reviewed in detail in portions of 10 inspections during this assessment period. These inspections included the review of related IE Circulars and Bulletins, maintenance procedures, staffing, work control, work package implementation, and the overall effectiveness of the maintenance program. One violation was identified in this area as follows:

Severity Level IV - Work Order No. 86-2829 for filling and venting the suppression pool level instruments was not prepared, controlled, or accomplished in accordance with instructions and administrative procedures in that uncontrolled non as-built drawings were being used to perform safety related work; work was performed out of required sequence; incorrect instructions were not properly corrected; independent restoration verifications were not properly accomplished; and the work order did not include the purpose, as required (Inspection Report 50-440/86006). Another example of this violation is identified in Section P.

This violation identified weaknesses in Instrumentation and Control (I&C) implementation of the maintenance program. In addition, a major undertaking by the licensee to provide controlled "as-built" drawings of instrument lines occurred as a result of the identification of the lack of "as-built" drawings used to perform the I&C Work Order. The licensee took prompt corrective actions to assure that personnel were counseled on the importance of following established procedures. A site-wide compliance training program was also established.

The licensee's program for implementation of maintenance activities was found to be generally adequate and amply staffed. Maintenance personnel were found to meet FSAR and ANSI qualification requirements but did not always meet the requirements specified by the licensee's more conservative administrative procedures. The licensee has committed to have these personnel qualified to their own program by December 31, 1986. Region III has found this implementation schedule to be acceptable.

Management was found to be committed to improving their established program as deficiencies are identified during actual implementation. This was apparent when, during a recent NRC review of their maintenance program, three weaknesses in the licensee's program were brought to their attention, and

the inspector was shown evidence that the weaknesses had been previously self-identified and procedural changes had already been prepared and were being reviewed to correct the weaknesses. Utilizing a state-of-the-art computerized information storage and scheduling system, the licensee's periodic maintenance (PM) program appeared to adequately identify and direct the conduct of safety related PM activities.

As described above, management appears to be adequately involved in assuring quality. Their approach to resolving technical problems, once identified, appears to be comprehensive, and their responsiveness to NRC identified concerns were found to generally be prompt and thorough. However, weaknesses in the implementation of maintenance activities as identified in the above violation, and licensee self-identified maintenance discrepancies have required, and will continue to require management attention and involvement.

2. Conclusions

The licensee is rated Category 2 in this area. The licensee was not assessed in this area in the previous SALP period.

3. Board Recommendation

None.

N. Surveillance and Inservice Testing

1. Analysis

The examination of this functional area included portions of twelve inspections by Region III inspectors. The inspections included the review of Local Leak Rate Testing (LLRT), applicable IE Bulletins, numerous surveillance instructions (as part of the NRC's preoperational phase inspection program), observations of surveillance test performance, and review of programmatic aspects of surveillance testing including the computerized scheduling system (repetitive task program). No violations of NRC requirements or deviations from commitments were identified in this functional area.

During the review of LLRTs, procedures were generally well-defined and accurate. Technical issues raised as a result of an earlier Integrated Leak Rate Test inspection (conducted during the previous SALP period) were found to have been resolved satisfactorily. Management's responsiveness to inspector identified concerns was excellent and staffing was found to be well qualified and adequate for LLRT activities.

Review of surveillance instructions (SVIs) revealed that, in general, they were prepared in accordance with administrative procedures, technically adequate, and met the requirements of the initiating documents (i.e., Technical Specifications, FSAR, etc.). During the licensee's preparation of the SVIs, several program actions were initiated by management to ensure quality and technical adequacy. These actions included initial development, SVI walkdown/dryrun, rewrite, and run for credit. By performing these functions, many of the minor errors associated with the development of this massive SVI program were identified and corrected prior to the "run for credit." However, problems were encountered during the "run for credit" phase that could have been avoided had there been a trial run of the SVIs prior to their run for credit. These problems, which required initiation of procedure changes, may have resulted in some plant delays, but did not have any direct safety implications.

A sample review of surveillance procedures required by Technical Specifications was conducted and found, in general, to be in agreement with the Technical Specifications. However, when reviewing the licensee's program for ensuring that non-routine surveillances were conducted as required by Technical Specifications, it was discovered that the SVI for determining the shutdown margin prior to or during the first startup after each refueling, was not included in their "repetitive task" program or any other written program. Subsequently, the licensee performed a review of all non-routine surveillances specified in the Technical Specifications to ensure that they were included in their operating procedures. No other examples of SVIs were found to be missing from the licensee's operating procedures.

During this assessment period, some SVI performance observations were conducted which included SVIs associated with the fueling activities. These observations determined that the SVIs were being conducted as specified by administrative procedures and those performing the work were knowledgeable and followed the instructions as required.

Management's responsiveness to and resolution of NRC identified issues were adequate during this assessment period. The licensee's staff appeared to be adequate, knowledgeable and well trained for both the preparation and implementation of the SVI program.

2. Conclusion

The licensee is rated a Category 2 in this area. The licensee was not assessed in this area during the previous SALP period.

3. Board Recommendations

None.

0. Fueling

1. Analysis

The licensee received an operating license on March 18, 1986, and fuel loading commenced on March 21, 1986. Fueling was completed on April 24, 1986, approximately two weeks behind schedule. Region III inspectors provided 24 hour/day coverage of the initial fueling process and performed extensive inspection activities associated with Technical Specification compliance, nuclear instrumentation calibration, core physics testing, shift turnover activities, refueling floor access control, and other associated fuel loading activities. No violations of regulatory requirements or deviations from commitments were identified.

Fuel loading activities were suspended on several occasions due to the refueling machine main hoist drive motor supply breaker tripping on overcurrent on numerous occasions and spurious high neutron flux signals due to electrically induced "noise" on the intermediate range neutron flux monitoring (IRM) system which resulted in trips of the reactor protection system which were properly reported. The licensee's actions to repair the hoist included, among others, the replacement of the supply breaker, fuses, power supply, and control circuitry components. Initially, licensee corrective actions to resolve this equipment problem were slow to be formulated and not well organized. Late in the fueling process it was determined that a silicon controlled rectifier (SCR) in the power supply to the main hoist was the cause of the trips. This SCR had been previously replaced, and therefore, not suspect. Following re-replacement of the defective SCR, the main hoist drive operated normally. The refueling equipment is non-safety related and the associated problem did not pose a safety concern. The IRM noise problem was attributed to grounding and/or cabling deficiencies which were identified by exhaustive troubleshooting and corrective maintenance activities.

Inspector observations indicated fuel loading activities were well coordinated and that licensee personnel proceeded in a cautious and deliberate manner.

Management was actively involved in assuring quality and adequate but sometimes slow resolution of technical issues during fuel loading activities. Management ensured that no undue scheduling pressure, which may have resulted in operational/technical specification errors, was placed on the operators during this initial post license activity. There were sufficient numbers of operators on duty and they appeared to be well trained and performed in a professional manner commensurate with the positions they held.

2. Conclusions

The licensee is rated Category 2 in this area. The licensee was not assessed in this area during the previous SALP period.

3. Board Recommendations

None.

P. Operational Readiness/Plant Operations

1. Analysis

Inspection of this functional area during the assessment period consisted of portions of ten inspections and one inspection subsequent to the assessment period by the resident and project inspection staff. These inspections included examinations of (1) normal operating procedures; (2) abnormal operating procedures; (3) emergency operating procedures; (4) annunciator response procedures; (5) system status control; (6) operating logs and records; (7) control of work activities; (8) routine operations; and, (9) reportable events.

One violation and one example from a violation contained in section M were identified, as follows:

- a. Severity Level IV (one of two examples) - System Operating Instructions (SOIs) were found to be technically inadequate. This example is part of a violation identified in Section M (Inspection Report 50-440/86006).
- b. Severity Level V - Inadequate review of a tag-out prior to authorization and attempted performance of associated work (Inspection Report 50-440/86008).

Subsequent to the assessment period, we issued Report No. 50-440/86011, which identified three additional violations as set forth below. While these violations are not included in Paragraph V.B.1, Table 1 of this report, they are addressed here because they reflect on performance during this assessment period.

- a. Severity Level IV - Failure to suspend containment/drywell purge with inoperable plant vent radiation monitor (Inspection Report 50-440/86011).
- b. Severity Level IV - Two examples of failure to maintain containment integrity during core alterations (Inspection Report 50-440/86011).
- c. Severity Level IV - Failure to take compensatory actions for inoperable carbon dioxide fire suppression system (Inspection Report 50-440/86011).

Licensee management has been actively involved in adequately resolving technical issues and assuring quality. As a result of the violation concerning SOIs, the licensee proposed a program of detailed re-review to assure technical adequacy. The licensee committed to conducting re-reviews and making necessary corrections prior to the use of each SOI under the operating license. Followup inspections of SOIs subjected to the re-review prior to fuel load and initial criticality determined that the licensee's corrective actions were responsive and effective in resolving the identified concern.

The other four violations all resulted from personnel errors, including failures to comply with established administrative controls. While these violations were licensee identified, and corrective actions were taken to address each occurrence, they collectively suggested a need for further evaluation to determine whether or not they resulted from a lack of understanding of administrative controls, excessive workloads, or inattention to detail by operating personnel. These matters were discussed with the licensee in a management meeting conducted subsequent to the assessment period on June 5, 1986. Licensee management personnel exhibited an understanding of the significance of these items and informed NRC management that additional evaluations of the events had resulted in changes to personnel work assignments. The licensee also indicated that future performance would be closely monitored such that any need for additional actions would be promptly identified and acted upon.

Licensee management, supervisory and non-supervisory operating personnel have exhibited an understanding of the high level of performance which must be achieved and maintained in this functional area. Throughout the approach to operating license issuance the licensee exhibited a good deal of caution in assuring the readiness of personnel, equipment, procedures, and programs for plant operations. Concerns identified by licensee self-assessment as well as NRC inspection personnel were responded to in a thorough and timely manner. Following operating license issuance, the licensee continued with this same caution and responsiveness to identified concerns.

A single programmatic concern remained at the close of the assessment period. Based upon inspector review of the licensee's response to a number of technical problems which arose following operating license issuance, it appeared that operating management personnel had neither demanded nor received rigorous and coordinated technical support. Subsequent to the assessment period the licensee made a number of personnel and organizational changes intended, in part, to address this identified weakness.

Notwithstanding the identified violations and concern, the conduct of day-to-day activities under the operating license has been generally found to be well controlled by knowledgeable operating personnel and in accordance with technically adequate procedures.

2. Conclusions

The licensee is rated Category 2 in this area. The licensee was rated Category 2 in the Operational Readiness assessment area during the last SALP period but was not assessed in the Plant Operations area.

3. Board Recommendations

None.

Q. Training and Qualification Effectiveness

1. Analysis

Evaluations of the licensee's training and qualification effectiveness has been and is an ongoing activity by Region III inspectors in all areas of the plant's construction, preoperational, and operational phases. No violations were identified in this assessment area.

Specific training programs reviewed included observations of the general employee training program, the radiological controls training course, and portions of maintenance and operating personnel training programs. These reviews indicated that the instructors followed prescribed training plans and met the training objectives. In addition, the training courses, attended by inspectors, appeared to adequately cover the subject matter in sufficient detail to ensure on-the-job training requirements were being met.

During an inspection, a deficiency was identified concerning the untimely distribution and training for temporary changes to plant procedures. Procedure changes were being issued without providing training to plant personnel. To resolve this issue, the licensee changed applicable procedures to require training of appropriate personnel when a temporary change to a Plant Administrative Procedure is issued.

During the review of FSAR Chapter 13 "Conduct of Operations," specifically, the licensee's staff qualifications and training, several discrepancies were identified where the qualifications of incumbent operational staff did not agree with the requirements delineated in ANSI N18.1 and/or Regulatory Guide 1.8. To resolve these discrepancies, the licensee undertook a comprehensive review of their operational staff qualifications and requirements and subsequently amended (Amendment 21) the FSAR to update and clarify the plant organization. In addition, the licensee replaced one individual with one that met qualification requirements and provided additional information for the other individuals that had discrepant qualifications. The amendment and additional information resolved the discrepancies.

As identified above, management is very responsive to NRC identified issues and generally resolves them with comprehensive corrective actions. When deficiencies are either NRC or self-identified in various areas of the plant organization, enhanced training is a method often incorporated into their corrective actions to ensure that plant personnel are informed of the deficiencies and management's planned and implemented resolutions. Generally, plant staff training and qualifications have been found to be above average; however, due to the change from the construction and preoperational phases to the plant operational phase, increased management attention to training is warranted to ensure that all personnel are kept abreast of plant procedures that are undergoing fine-tuning as a result of implementation experience.

The licensee is currently planning to achieve full INPO accreditation of their training program by October 1987. This is an approximate one year slip from their previous estimate of October 1986. However, if accomplished as currently scheduled, this will comply with industry commitments.

2. Conclusions

The licensee is rated a Category 2 in this area. The licensee was not assessed in this area in the previous SALP period.

3. Board Recommendations

None.

V. SUPPORTING DATA AND SUMMARIES

A. Licensee Activities

For the first nine months of the assessment period, Perry Unit 1 was considered to be in the construction/preoperational testing phases. On March 18, 1986, a low power operating license was issued by the NRC. Initial fuel loading began on March 21, 1986, and was completed on April 24, 1986. Fueling progressed slower than anticipated due to recurring problems with the re-fueling machine and associated fuel bundle lifting hoist. During and subsequent to fuel loading, a number of operational events occurred, including some which required NRC notifications per 10 CFR 50.72 and 50.73. These events have required and are requiring extensive licensee investigation as to their causes and development of adequate corrective actions. Initial criticality occurred on June 6, 1986. For the remainder of the time prior to issuance of this report, the unit has operated at less than 5% power with the low power testing portion of the startup program continuing.

B. Inspection Activities

1. Inspection Data

Facility Name: Perry Nuclear Power Plant, Unit 1
Docket No. 50-440

Inspections: No. 50-440/85016; No. 50-440/85027;
No. 50-440/85031; No. 50-440/85034;
No. 50-440/85040 through No. 50-440/85042;
No. 50-440/85044; No. 50-440/85047
through No. 50-440/85051; No. 50-440/85053
through No. 50-440/85085; No. 50-440/85087
through No. 50-440/85090; No. 50-440/86001;
50-440/86002; No. 50-440/86004 through
No. 50-440/86010; No. 50-440/86011* and
No. 50-440/86013*.

*Inspections performed subsequent to this assessment period but included in the assessment.

TABLE 1
ENFORCEMENT ACTIVITY

This table includes those violations issued during the assessment period. Not included are the violations discussed in Paragraphs IV.L and IV.P which occurred after the assessment period.

<u>Functional Areas</u>	No. of Violations in Each Severity Level					
	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>V</u>	<u>DEV</u>
A. Containment and other Safety-Related Structures						
B. Piping System and Supports				1		
C. Heating, Ventilating, and Air-conditioning						
D. Electrical Power and Instrument and Control Systems						
E. Quality Programs and Administrative Controls Affecting Quality				2		
F. Licensing Activities						
G. Preoperational Testing				4		2
H. Startup Testing						
I. Radiological Controls						
J. Fire Protection						
K. Emergency Preparedness						
L. Security						
M. Maintenance				1		
N. Surveillance						

<u>Functional Areas</u>	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>V</u>	<u>DEV</u>
O. Fueling						
P. Operational Readiness/ Plant Operations					1	
Q. Training and Training Effectiveness						
TOTALS				8	3	

2. Inspection Summary

Throughout the assessment period, NRC Region III conducted inspections to assess the readiness of Perry Unit 1 for power operations. Included were reviews of the plant fire protection program, procedures, Technical Specifications, Final Safety Analysis Report (FSAR) and as-built configuration comparison, adequacy of operating shifts, preoperational testing, startup testing, and adequacy of management and engineering support activities. In addition, an Augmented Investigation Team and support team walkdown inspection was conducted to assess the effect of the January 31, 1986, earthquake.

C. Allegation Review

Region III received 18 allegations during the assessment period that resulted in inspections by resident and/or region based inspectors. None of the findings involved significant safety issues.

D. Escalated Enforcement Action

None.

E. Management Conferences Held During the Appraisal Period

1. September 12, 1985, Perry plant site - Meeting to discuss the NRC fuel load requirements.
2. September 26, 1985, Perry plant site - Meeting to discuss the SALP 5 results.
3. October 11, 1985, Perry plant site - Meeting to discuss items required for fuel load.
4. November 6, 1985, Perry plant site - Meeting to discuss Preoperational Test Program problems and items required for fuel load.
5. December 3, 1985, Perry plant site - Meeting to discuss the status of items required for fuel load.

6. December 17, 1985, NRC offices, Bethesda, Maryland - Meeting to determine readiness of Perry Unit 1 for operating license.
7. February 11, 1986, Perry plant site - Meeting to discuss review of the January 31, 1986, earthquake and operational readiness to load fuel.

F. Confirmatory Action Letters

On January 31, 1986, Region III issued a Confirmatory Action Letter (CAL-RIII-86-01) to document an agreement with the licensee for them to maintain all affected equipment in the "as found" condition until the NRC Augmented Investigation Team (AIT) could examine any evidence which would be needed to evaluate the effects of the January 31, 1986, earthquake that occurred near Perry.

Licensee's cooperation with the NRC in response to the earthquake event and their own immediate and subsequent followup of the event were found to be excellent. Their response to the CAL provided the NRC with valuable data that enabled the staff to better evaluate the impact of the earthquake on the plant.

G. Review of Licensee Event Reports, Construction Deficiency Reports, and 10 CFR 21 Reports Submitted by the Licensee

1. 10 CFR 50.55(e) Reports (Construction Deficiency Reports)

During this SALP period, three 10 CFR 50.55(e) items were reported by the licensee. The formal reports were timely, well stated, and complete. Corrective actions were promptly initiated and all were documented as closed.

2. 10 CFR 21 Reports

There have been five 10 CFR 21 reports received concerning the Perry plant. All but one of these reports have been reviewed by the licensee and no modifications to the plant were necessary. Only one, concerning Kaman high voltage power supply in the post accident monitoring system, appears to have safety significance, and it must be resolved prior to exceeding 5% power.

3. Licensee Event Reports (LERs)

The licensee received their license on March 18, 1986, which requires them to submit LERs to the NRC in accordance with 10 CFR 50.73. Subsequently, three LERs were received from the licensee by closure of the SALP assessment period. The reports were found to be complete, well written, and followup/corrective actions were generally adequate. The events were found to be primarily caused by hardware and/or design problems.

H. Licensing Activities

1. NRR/Licensee Meetings

November 12, 1985 -	NRC Management visit to Perry plant site to discuss readiness for licensing.
December 17, 1985 -	NRC/CEI meeting in Bethesda to discuss Perry 1 readiness for licensing.
February 11, 1986 -	NRC visit to plant site during which CEI presented earthquake findings - plant readiness for licensing.
March 12/13, 1986 -	NRC/CEI presented details of evaluations of findings on January 31, 1986, earthquake.

2. Commission Meetings

None.

3. FSAR Amendments

July 19, 1985	CEI issued FSAR Amendment 20
October 4, 1985	CEI issued FSAR Amendment 21
November 20, 1985	CEI issued FSAR Amendment 22
November 22, 1985	CEI issued FSAR Amendment 23
December 17, 1985	CEI issued FSAR Amendment 24

4. NRR Issuance of SER Supplements

November 20, 1985	NRC issued SER Supplement No. 7
January 15, 1986	NRC issued SER Supplement No. 8
March 4, 1986	NRC issued SER Supplement No. 9

5. Other Activities

July 17, 1985	NRC Commissioner Asselstine toured plant.
September 3, 1985	ASLB concluded partial initial decision on Emergency Planning, Hydrogen Control, and TDI Diesel Generator Issue.

September 20, 1985	NRC accepts CEI schedule for meeting the Hydrogen Control Rule - 10 CFR 50.44(3)(c)(vii)(A).
October 29, 1985	CEI requested extension of CPPR-148 to December 21, 1985. NRC Chairman Palladino toured plant.
October 31, 1985	NRC transmitted the draft low power operating license for Perry 1 to CEI for comment.
November 13, 1985	NRC Commissioner Zech toured plant.
November 19, 1985	NRC issued final draft of Perry 1 technical specifications for CEI certification.
November 29, 1985	CEI requested extension of CPPR-148 to January 31, 1986.
December 27, 1985	CEI requested extension of CPPR-148 to March 3, 1986.
January 30, 1986	NRC Commissioner Bernthal toured plant.
January 31, 1986	Magnitude 5.0 earthquake occurs near Perry plant site. As a result of the earthquake, a Confirmatory Action Letter (CAL) 86-01 was issued. CEI requested extension of CPPR-148 to April 15, 1986.
February 6, 1986	Board Notification 86-03 issued regarding Perry earthquake.
February 12/13, 1986	NRC/CEI briefing of ACRS on preliminary findings regarding the January 31, 1986, earthquake.
March 10, 1986	CEI formally certified Perry 1 technical specifications.
March 14, 1986	CEI requested extension of CPPR-148 to May 15, 1986.

March 17, 1986	ACRS report to Chairman NRC on NRC findings and confirmatory action items regarding the January 31, 1986, earthquake.
March 18, 1986	NRC issued a low power operating license for Perry 1.
March 20, 1986	ASLAB ordered exploratory hearings on seismic event.
March 21, 1986	Fuel load commenced.
April 15, 1986	Full Scale Emergency Plan Exercise was conducted.
April 18, 1986	Commission Order vacated ASLAB Order cancelling exploratory hearings.
April 24, 1986	Fuel load complete.
June 6, 1986	Initial Criticality achieved.