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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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May 31, 1984

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U.S. Nuclear Regulatory Commission
Washington, DC 20555

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Atomic Safety and Licensing Appeal Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555

In the Matter of
CLEVELAND ELECTRIC ILLUMINATING COMPANY, ET AL.
(Perry Nuclear Power Plant, Units 1 and 2)
Docket Nos. 50-440 OL, 50-441 OL

Dear Members of the Appeal Board:

By means of this letter, I am serving to you and to the Licensing Board copies of the recent NRC Systematic Assessment of Licensee Performance (SALP) of the Perry Nuclear Plant. Sunflower Alliance has been served a copy. I am providing Ohio Citizens for Responsible Energy (OCRE) with one.

Sincerely,

Colleen P. Woodhead
Counsel for NRC Staff

Enclosures: As stated

cc w/ enclosures:
Judge Bloch
Judge Bright
Judge Kline
Susan Hiatt

DS01

SALP 4

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

The Cleveland Electric Illuminating Company

PERRY NUCLEAR POWER PLANT, UNITS 1 AND 2

Docket No(s). 50-440; 50-441

Report(s) No. 50-440/ 84-08; 50-441/84-08

Assessment Period

October 1, 1982 through December 31, 1983

CONTENTS

I. INTRODUCTION

The NRC has established a program for the 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 those observations. SALP is supplemental to normal regulatory processes used to insure compliance to the rules and regulations. SALP is intended primarily from a historical point to be sufficiently diagnostic to provide a rational basis for allocating future 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 the staff members listed below, met on March 1, 1984, to review the collection of performance observations and data to assess the licensee performance in accordance with the guidance in NRC Manual Chapter 0516, Systematic Assessment of Licensee Performance: a summary of the guidance and evaluation criteria is provided in Section II of this report.

This report is the SALP Board's assessment of the licensee safety performance at Perry Nuclear Power Plant, Units 1 and 2 during the period of October 1, 1982 through December 31, 1983.

The results of the SALP Board assessments in the selected functional areas were presented to the licensee at a meeting held on April 10, 1984.

The SALP Board for Perry consisted of the following attendees:

C. E. Norelius, Director, DPRP
J. F. Streeter, Chief, Engineering Branch 1
J. E. Konklin, Chief, Projects Section 1A
M. L. Gildner, Senior Resident Inspector, Construction
J. A. Grobe, Senior Resident Inspector, Operations
P. R. Pelke, Project Inspector
T. N. Tambling, Chief, Program Support Staff
J. J. Stefano, Project Manager, NRR
B. J. Youngblood, Chief, LB1, NRR

II. CRITERIA

The licensee performance is assessed in selected functional areas depending upon 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	Category 1	Category 2	Category 3
1. Containment and Other Safety-Related Structures	X		
2. Piping Systems and Supports		X	
3. Safety-Related Components		X	
4. Support Systems		X	
5. Electrical Power Supply and Distribution		X*	
6. Instrumentation and Control Systems		X*	
7. Licensing Activities		X*	
8. Quality Assurance Activities		X	
9. Radiological Controls		X	
10. Preoperational Testing		Not Rated	

*A change from the previous assessment period.

IV. PERFORMANCE ANALYSES

1. Containment and Other Safety-Related Structures

a. Analysis

Portions of ten inspections were conducted by the resident and region based inspectors which included review of spent fuel storage rack installations, a review of potential corrosion problems related to the sensitization of stainless steel cladding in the suppression pool, and a review of the acceptability of the containment vessel radiographs. Inprocess activities that were observed included observation of the Unit 2 Containment Dome Set, Units 1 and 2 Shield Building Dome Concrete placements, Unit 2 Refueling Bridge Rail concrete placement, concrete blockout placements, Biological Shield Wall repairs, Containment Building Annulus modifications, and coating activities. In addition, a field "as-built" walkdown of steel structures in both the containment and auxiliary building was conducted.

The Construction Appraisal Team evaluated the Seismic Clearance Program, concrete expansion anchor bolts, concrete placement, concrete and reinforcing steel placement quality, concrete and soils records, containment vessel steel, structural steel installation activities and design changes and nonconformance reports in these areas.

One item of noncompliance was identified relative to the Seismic Clearance Program:

> Severity Level V - Inadequate engineering disposition of several seismic clearance violations (Report Nos. 50-440/83-31 and 50-441/83-30).

The licensee took prompt corrective action including a review of seismic clearance violation calculations and dispositions, developing a standard design input criteria for engineering calculations, and instructing engineers as to the proper practice of dispositioning seismic clearance violations.

Additionally, the Construction Appraisal Team identified 8 out of 340 structural welds inspected which were in part not in accordance with the requirements of AWS D1.1, Structural Welding Code. A nonconformance report was issued by the licensee and the 8 welds have been repaired. The licensee examined additional welds and made repairs when required. This finding was combined with other welding problems resulting in a Severity Level IV item of noncompliance tabulated under the Piping Systems and Supports functional area.

In essentially all cases, construction activities were accomplished in accordance with procedures, design drawings, specifications, and regulatory requirements. Problems were properly identified and addressed. Design changes and nonconformance reports were processed in accordance with the quality assurance program and regulatory requirements.

The licensee's aggressive management involvement and concern for quality have been evidenced by only one item of noncompliance identified during the assessment period, effective controls over installation and inspection activities that minimize deficiencies, and a program for identification and prompt correction of identified deficiencies.

b. Conclusion

The licensee is rated Category 1 in this area. This is the same rating as the previous assessment period.

c. Board Recommendations

None.

2. Piping Systems and Supports

a. Analysis

Examination of this functional area consisted of portions of seven inspections. In the area of reactor coolant pressure boundary and safety-related piping, welds were visually examined, shop weld radiographs were reviewed, welding and NDE personnel qualification and certification documentation was examined, and related document packages were reviewed.

During the previous assessment period, a number of issues were raised during review of procedures and work activities relative to the site field design change control process in the piping suspension area. In a meeting conducted on September 21, 1982, the licensee presented an upgraded program to resolve these issues. The upgraded program appeared adequate with some minor exceptions which the licensee agreed to correct.

In the area of preservice inspection, four piping welds were ultrasonically examined by the Region III inspector using NRC equipment. These welds had been previously examined by the licensee. The results of the NRC examinations were in agreement with the licensee's results. In addition, procedures, material and equipment certifications, personnel certifications, and data reports were examined and work activities were observed. One of the licensee's audit reports was examined and found to be generally complete and thorough. Personnel involved in the areas reviewed were properly trained and certified.

The Construction Appraisal Team evaluated piping, pipe supports/restraints, the piping "as-built" program, concrete expansion anchors for pipe supports/restraints, and design changes and nonconformance reports in these areas. Welds and welding activities for piping, pipe supports/restraints, and pipe whip restraints were also assessed through review of radiographs and observation of NDE field activities, review of NDE personnel qualifications, and interviews with NDE personnel.

Two items of noncompliance were identified in this functional area:

(1) Severity Level IV - Several seismic pipe supports/restraints were not constructed and inspected in accordance with design requirements; the as-built verification program for safety-related valves, valve operators, and pipe supports/restraints failed to identify discrepancies (Report Nos. 50-440/83-31 and 50-441/83-30).

(2) Severity Level IV - Fabrication requirements for field installed branch connection weld-o-lets, and measures to control the welding of stainless steel socket welds, were found to be deficient with respect to specific ASME Code requirements; welder qualification radiographs did not conform to appropriate quality standards; welding inspections performed in structural steel and HVAC applications were found to be deficient with respect to specific requirements stated in the AWS D1.1 Structural Welding Code (Report Nos. 50-440/83-31 and 50-440/83-30).

These items of noncompliance were identified by the Construction Appraisal Team. Item (1) involves a number of examples which indicate that some piping and pipe support/restraint deficiencies were not identified during QC construction acceptance inspections or during the "as-built" verification program. A weakness in procedural adequacy and adherence was observed in this area. Item (2) involves isolated deficiencies in the area of welding and nondestructive examination.

The licensee has taken prompt corrective action to resolve these noncompliances including issuing nonconformance reports, retraining personnel, instituting mandatory hold points, revising procedures, and performing audits. In general, the activities observed, the management controls used, and the records and record control systems in place met requirements.

b. Conclusion

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

c. Board Recommendations

The Board notes that a potential problem in the use of stiff pipe clamps has been identified by the NRC vendor inspection program as discussed in Information Notice 83-80.

3. Safety-Related Components

a. Analysis

Examination of this functional area consisted of portions of three inspections which included review of the Unit 1 reactor vessel internals, welding activities for attaching piping components to sections of pipe, and rework of the Emergency Service Water pumps. Additionally, the Construction Appraisal Team reviewed components from the RCIC and RHR systems to determine whether purchase specification requirements conform with FSAR commitments and whether installed hardware conforms with supplier documentation, purchase specification requirements and FSAR commitments.

On September 15, 1983, General Electric Company broke a lifting rig while attempting to lift the moisture separator from the reactor pressure vessel. Twenty-eight of 32 holddown bolts between the moisture separator and the core shroud were engaged during the lift. Two items of noncompliance were identified as a result of this incident:

(1) Severity Level IV - Failure to control handling of safety-related equipment during removal of the moisture separator from the reactor pressure vessel in that an inadequate traveler procedure was used, records for the placement of the assembly into the vessel did not indicate that the assembly had been bolted down, and personnel performing the evolution were not familiar with the bolting mechanism (Report No. 50-440/83-34).

(2) Severity Level IV - Failure to ensure that hoisting equipment was not overloaded during removal of the Moisture Separator from the reactor pressure vessel in that the polar crane load cell was inoperable (Report No. 50-440/83-34).

No damage to safety-related components resulted from the lifting incident. Procedural inadequacies have been corrected by the licensee. The contractor's rigging procedure was revised to explicitly state that all lifts of reactor vessel components are Class A lifts to ensure full QA/QC coverage.

The Construction Appraisal Team found that the licensee has identified purchased equipment which does not conform to FSAR commitments and has not initiated timely corrective actions to resolve these problems. Five of nine RCIC/RHR components sampled were found to have discrepancies. For example, a RCIC isolation valve did not meet the FSAR opening and/or closing requirement of 10 seconds and an incorrect actuator model number was found on a RCIC suction valve. These items in conjunction with deficiencies in the area of HVAC supports were combined in a Severity Level V item of noncompliance tabulated in the Support Systems functional area.

Other than noted above, the activities observed and the management controls used met requirements. Licensee personnel were trained and qualified and installations were in accordance with approved procedures. Inprocess QC coverage appeared to be adequate and documentation of events was made and included in document packages. Several of the licensee's audits were examined and found to be generally complete and thorough.

b. Conclusion

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

c. Board Recommendations

None.

4. Support Systems

a. Analysis

In the area of Heating, Ventilation, and Air Conditioning, the Construction Appraisal Team reviewed supports/restraints, equipment, and duct segments for field verification of conformance to design and procedural requirements. Duct joint makeup was examined on numerous duct segments. Features verified were configuration, member size, identification, weld size, fastener/expansion anchor installation, duct gasketing and bolting. Additionally, 160 welds were inspected comprising a sample of vendor procured welds and field welds completed by the HVAC contractor. Welding procedures, welder qualification records, NDE procedures and NDE personnel qualifications were reviewed. Two NDE inspectors were observed and evaluated for their abilities to use the AWS D1.1 Code and to follow the HVAC contractor's NDE procedures.

One noncompliance was identified:

> Severity Level V - The HVAC contractor's corrective action programs did not promptly and properly identify, evaluate, and correct some recurring welding deficiencies in installed and QC accepted HVAC duct supports in that 2 of 10 supports/restraints inspected had significantly undersized member to building structure attachment welds and three adjacent supports were observed to have undersized attachment welds. In addition, the licensee has identified purchased equipment that does not meet FSAR commitments and has not initiated timely corrective action to resolve these identified problems (Report Nos. 50-440/83-31 and 50-441/83-30).

It appears that the majority of deficient welds were accepted by one inspector who is no longer employed at the site. The HVAC contractor had been aware that the work done by this individual was suspect and a memorandum stated that a complete reinspection of the work performed and inspected by this individual was proceeding. However, there did not appear to be any documentation to consolidate the work scope of this individual nor had all his work been completely reinspected some 15 months later. The last portion of this noncompliance is an example which is discussed under the functional area, Safety-Related Components.

One example of noncompliance which is tabulated in the Piping Systems and Supports functional area was identified for HVAC welds which were deficient with respect to the requirements stated in AWS D1.1.

In general, HVAC material, configuration, location and installation appeared to conform to design documents. Welding and NDE activities were found to comply with the requirements of the AWS D1.1 Structural Welding Code.

b. Conclusion

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

c. Board Recommendations

None.

5. Electrical Power Supply and Distribution

a. Analysis

In the previous assessment period, the licensee was not rated because NRC review of the licensee's corrective actions with regard to previous investigation findings had not been completed. In response to the previous SALP Board recommendation, a significant increase in NRC inspection effort was implemented. During this assessment period, fifteen inspections were conducted in this area which included review of the licensee's corrective actions with regard to previous investigation findings, followup on other open items, evaluation of L. K. Comstock documentation task force review efforts and identified deficiencies, review of personnel qualifications, interviews with QA/QC and craft personnel, review of quality assurance implementing procedures, observation of work activities, and review of quality records.

Additionally, the Construction Appraisal Team evaluated whether safety-related components and systems were installed in accordance with regulatory requirements, FSAR commitments, and approved construction specifications and drawings. Additional objectives were to determine whether procedures, instructions, and drawings used to accomplish construction activities were adequate and whether quality-related records adequately reflect the completed work. The Construction Appraisal Team concluded that electrical components were installed in accordance with design documents and exhibited good workmanship.

Eleven items of noncompliance and the two deviations were identified during the 15 inspections and Construction Appraisal Team review:

(1) Severity Level IV - Failure of the electrical contractor QA program to provide control over deficiencies identified by an internal documentation task force, in that these deficiencies were addressed in uncontrolled review checklists and internal letters (Report Nos. 50-440/83-06 and 50-441/83-06).

(2) Severity Level V - Failure to translate design requirements into two drawings (Report Nos. 50-440/83-06 and 50-441/83-06).

(3) Severity Level IV - Failure to establish and execute a program for inprocess hanger weld inspections (Report Nos. 50-440/83-06 and 50-441/83-06).

(4) Severity Level V - Modification of a 4160V bus bar support without an approved field variance authorization (Report No. 50-440/83-26).

(5) Deviation - Correction of QA records in a manner which is not consistent with accepted industry practices in that corrections made on an inspection record did not identify the person or indicate the date corrections were made (Report No. 50-440/83-26).

(6) Severity Level IV - QA procedures did not provide control for development, approval, distribution, and revision of relay setting sheets (Report Nos. 50-440/83-29 and 50-441/83-28).

(7) Deviation - Inadequate procedures and drawings to verify that dual element type fuses are installed in MOV power circuits in that two single element type power fuses were installed in a motor control center (Report No. 50-440/83-30).

(8) Severity Level IV - Failure to maintain adequate separation of some cables and cable trays in several plant areas (Report Nos. 50-440/83-31 and 50-441/83-30).

(9) Severity Level V - Raceway sketches used to perform installation of conduit and conduit supports in the containment drywell area lacked appropriate procedural control for items such as issuance, revision, retrieval and approval (Report Nos. 50-440/83-31 and 50-441/83-30).

(10) Severity Level V - An inspection report was closed out without implementing the required corrective action (Report No. 50-440/83-33).

(11) Severity Level V - Failure to follow procedures for training several cables in a resting position (Report No. 50-440/83-35).

(12) Severity Level V - Inadequate inspector qualification procedure in that it did not specify the steps to re-examine a candidate who failed his Level II qualification examination; during a walkdown of safety-related raceway and conduit installations, three cases were identified which violated the design separation criteria (Report Nos. 50-440/83-37 and 50-441/83-35).

(13) Severity Level V - Inadequate design review of schematic and wiring diagrams for three relay panels by the Architect-Engineer (Report Nos. 50-440/83-37 and 50-441/83-35).

The nature and severity levels of these noncompliances do not indicate significant programmatic deficiencies in the licensee's electrical QA program. While the number of noncompliances is larger than during the previous assessment period, they were mostly minor and were not indicative of a breakdown in this area. The large number of items was primarily due to a longer assessment period and an unusually large and intensive NRC inspection effort. The licensee took prompt and effective corrective action to resolve these findings.

The licensee's corrective actions in response to a previous NRC investigation appeared to be adequate. Eighteen of 24 unresolved items and noncompliances were closed in two followup inspections. Licensee corrective action for the remaining items has been completed; however, they remain open pending NRC verification.

During this assessment period a high level of performance was evidenced by management's attitude toward achieving quality through prompt resolution of NRC identified concerns and responsiveness to and involvement in problems identified by their QA program. Decision making appeared to be accomplished at a level appropriate for the circumstance.

Licensee and contractor organizations were adequately staffed with qualified personnel for the level of construction activity. The licensee has placed emphasis on staffing positions with the most qualified individuals. Positions were found to be clearly delineated in job descriptions and responsibilities were well defined. Since the last assessment period, the licensee has increased the number of QA personnel which monitor the electrical contractor's work activities.

The electrical contractor's procedures were found in general to be adequate and properly implemented. Licensee audits were complete and thorough, and audit findings were closed in a timely manner. QA records were well maintained and readily available.

b. Conclusion

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

c. Board Recommendations

None.

6. Instrumentation and Control Systems

a. Analysis

Portions of six inspections were conducted which included review of storage areas, QA records, and QA implementing procedures, observation of work activities, and weld material storage.

Additionally, the Construction Appraisal Team evaluated whether safety-related components and systems were installed in accordance with regulatory requirements, FSAR commitments, and approved construction specifications and drawings. Additional objectives were to determine whether procedures, instructions, and drawings used to accomplish construction activities were adequate and whether quality-related records adequately reflect the completed work. The Construction Appraisal Team concluded that instrumentation was installed in accordance with design documents and exhibited good workmanship.

Four items of noncompliance were identified:

(1) Severity Level IV - Turnover reviews of purchase orders and installation/fabrication packages were performed without a controlling procedure (Report No. 50-440/83-11).

(2) Severity Level V - Failure to perform and document a monthly storage inspection (Report No. 50-440/83-12).

(3) Severity Level IV - Removal of an instrument panel without a rework procedure (Report Nos. 50-440/83-19 and 50-441/83-18).

(4) Severity Level V - Failure to correctly void a nonconformance report (Report No. 50-440/83-33).

The items of noncompliance were isolated and the licensee took prompt corrective action to resolve the deficiencies. Most of the weaknesses identified in the licensee's program appear to be related to inadequate procedures in that certain activities were performed by the contractor which were not specifically addressed in the QA procedures or the requirements were poorly stated. In all cases, procedures were revised to address the concerns.

The licensee and contractor staffs appear to be adequate for the level of activity in this functional area. QA records were found to be complete, well maintained and readily available.

b. Conclusion

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

c. Board Recommendations

None.

7. Licensing Activities

a. Analysis

Principal licensing activities which occurred during this assessment period included the staff's detailed review of the Perry FSAR through Amendment 12 and issuance of SER Supplements 2 and 3. The licensee's performance in responding to Intervenor interrogatories and in testifying at the ASLB hearing was also assessed.

In March 1983, the licensee informed the staff of a 13 month delay in the Unit 1 fuel load date (from November 1983 to December 1984). This new date is consistent with the most optimistic date determined by the NRC Caseload Forecast Team during its project status assessment in January 1983. No change was requested in the fuel load date for Unit 2, which is scheduled for May 1987. In January 1983, an Order was issued approving an extension in the construction completion dates for Units 1 and 2 to December 1985 and November 1988, respectively.

In responding to the staff's technical questions and data requests, the licensee's performance has usually been timely and responsive. However, in some instances, responses to staff requests (e.g., mechanical engineering questions pertaining to the adequacy of pipe support structures, fire protection issues, and equipment qualification data requirements) have not been as complete or accurate as responses to other requests. To some extent, this was due to a lack of understanding of the specific information desired by the staff. Upon clarification, the information was accurately furnished by the licensee.

The licensee is always prepared to meet with the staff, sometimes on very short notice, to obtain a clearer understanding of the issues. Examples of this were most evident in meetings held to address containment systems, environmental equipment qualification, fire protection, and containment structural integrity issues. During such meetings, the licensee has continually demonstrated a thorough knowledge of the technical areas at issue, and has effectively utilized the services of its Architect Engineer (Gilbert Associates), its NSSS supplier (GE), and other contracted consultants to make the meetings productive.

The licensee's positive attitude, cooperation, and commitment to safety has been demonstrated by its active participation as a member of the BWR Owners Group, the Hydrogen Control Owners Group, the Licensing Review Group - II (created to address issues generic to BWR/6 plants), and the Transamerica Delaval Diesel Generator Owners Group.

The licensee was both candid and responsive with regard to the ASLB proceedings conducted during this assessment period. This was instrumental in obtaining a Board ruling which resolved the Construction QA contention, and in obtaining the Board's ruling on NRC proposed summary dispositions on other contentions, such as the turbine missile issue.

b. Conclusion

The licensee is characterized as knowledgeable and cooperative. However, since the licensee did not adequately respond to the staff's questions in several instances, the licensee is rated Category 2 in this area. The licensee was rated Category 1 in the previous assessment period.

c. Board Recommendations

None.

8. Quality Assurance Activities

a. Analysis

Portions of the licensee's quality assurance program were reviewed in each inspection conducted during the assessment period. Two inspections were specifically conducted which reviewed the Quality Assurance Program, licensee auditing activities, the quality assurance program activities of three contractors, the nonconformance program, the corrective action program, the trend analysis program, and management assessment

of the QA program. The Construction Appraisal Team reviewed material traceability, storage and maintenance, QC inspector effectiveness, and quality assurance. Portions of 31 inspections included followup on unresolved and open items, 10 CFR 50.55(e) reports, IE Bulletins and Circulars, and items of noncompliance. Seven items of noncompliance were identified:

(1) Severity Level IV - Failure to revise an identified inadequate contractor nonconformance report procedure which had resulted in nonconformance reports being closed prior to completion of required corrective actions (Report Nos. 50-440/83-25 and 50-441/83-24).

(2) Severity Level V - Failure to take timely corrective action in that a procedure was not revised in response to an item of noncompliance (Report Nos. 50-440/83-01 and 50-441/83-01).

(3) Severity Level V - Inadequate Quality Assurance Advisory Committee reviews (Report Nos. 50-440/83-13 and 50-441/83-12).

(4) Severity Level V - Failure to follow procedures to evaluate a deficiency for 10 CFR 50.55(e) reportability (Report Nos. 50-440/83-27 and 50-441/83-26).

(5) Severity Level V - The storage, issuance, application, and installation of some fasteners and components were not adequately controlled (Report Nos. 50-440/83-31 and 50-441/83-30).

(6) Severity Level V - Five of 300 nonconformances reviewed were closed prior to completion of the required corrective actions (Report Nos. 50-440/83-31 and 50-441/83-30).

(7) Severity Level V - A project procedure was inadequate in that it did not require the architect-engineer to initiate nonconformance reports when potentially defective components were identified (Report Nos. 50-440/83-37 and 50-441/83-35).

The licensee initiated prompt corrective action to resolve these noncompliances. The programmatic deficiencies that were identified are not considered to be indicative of a breakdown in the quality assurance area. Although specific items of noncompliance were identified, the licensee's project organization was aggressive in identifying and resolving construction problems.

In general, the licensee's programs met the requirements of 10 CFR 50, Appendix B. For example, audit programs were effective in identifying adverse trends and audit personnel were found to be qualified in accordance with licensee commitments; surveillance activities were effective in identifying and correcting concerns and deficiencies; the licensee's QA Manual and Trend Analysis Program were found to be acceptable; and project material traceability, storage, and maintenance programs were adequate.

b. Conclusion

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

c. Board Recommendations

None.

9. Radiological Controls

a. Analysis

Two preoperational inspections were conducted during the assessment period by regional specialists. The inspections covered radiation protection and environmental monitoring.

Since the last assessment period, additional management attention to the staffing and development of the radiation protection program has resulted in significant progress in program development. The licensee is actively seeking additional professional, technical, and specialist personnel to complete staffing of the health physics unit. The licensee has demonstrated a willingness to correct identified problems.

The licensee's management controls of the preoperational REMP and environmental protection program appear to be adequate. An onsite licensee employee is assigned to collect environmental samples and ship them for analysis to the contractor. The preoperational REMP is in its second year with air samplers placed in the field during the last month. Limited data on fish and sediment from the first year program indicated no problems. Environmental program items which require resolution include installation of a loudspeaker system required by the construction permit, disordered conditions at the barge slip area, and continuing shoreline erosion. The licensee has committed to resolve these items.

b. Conclusion

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

c. Board Recommendations

None.

10. Preoperational Testing

a. Analysis

The preoperational testing inspection effort began during this assessment period for Units 1 and 2 and was performed by region based inspectors. One inspection was conducted in this area consisting of a general overview of the licensee's provisions for management and control of the preoperational testing program. The inspection indicated that the licensee is progressing adequately in developing and implementing pre-operational testing controls and is receptive to NRC comments on its program. No items of noncompliance were identified.

The test equipment calibration and control program, personnel and responsibility assignments - with the exception of the test engineers who appear to be overburdened with responsibilities, and control of temporary modifications appeared to be adequately addressed.

In general, the licensee's equipment protection and cleanliness program with regard to protection of specific components and general housekeeping practices was good. The equipment turnover control program and procedures governing the Test Procedure Review Committee need the licensee's attention.

b. Conclusion

The licensee is not rated in this area because of the limited inspection activity conducted. This area was not rated in the previous assessment period.

c. Board Recommendations

None.

V. SUPPORTING DATA AND SUMMARIES

A. Noncompliance Data

Facility Name: Perry Nuclear Power Plant, Unit 1

Docket No. 50-440

Inspections: Unit 1

No. 82-12 through 82-17
No. 83-01 through 83-38

Functional Area Assessment	Noncompliances and Deviations Severity Levels I	II	III	IV	V	Dev.
1. Containment and Other Safety-Related Structures					1	
2. Piping Systems and Supports				2		
3. Safety-Related Components				2		
4. Support Systems					1	
5. Electrical Power Supply and Distribution				4	7	2
6. Instrumentation and Control Systems				2	2	
7. Licensing Activities						
8. Quality Assurance Activities				1	6	
9. Radiological Controls						
10. Preoperational Testing						
TOTALS	-	-	-	11	17	2

Noncompliance Data

Facility Name: Perry Nuclear Power Plant, Unit 2 — Docket No. 50-441

Inspections: Unit 2

No. 82-11 through 82-16
No. 83-01 through 83-36

Functional Area Assessment	Noncompliances and Deviations Severity Levels I	II	III	IV	V	Dev.
1. Containment and Other Safety-Related Structures					1	
2. Piping Systems and Supports				2		
3. Safety-Related Components						
4. Support Systems					1	
5. Electrical Power Supply and Distribution				4	4	
6. Instrumentation and Control Systems				1		
7. Licensing Activities						
8. Quality Assurance Activities				1	6	
9. Radiological Controls						
10. Preoperational Testing						
TOTALS	–	–	–	8	12	–

B. Licensee Report Data

1. Construction Deficiency Reports (CDRs)

Twenty-eight CDRs were submitted by the licensee under the requirements of 10 CFR 50.55(e). Three were retracted and 15 were vendor related. The balance of these items appeared to be under the licensee's control. The actual number of construction deficiencies is not unusual for a plant in this stage of construction. Written reports are submitted by established due dates and extensions are requested as required. The licensee's threshold for reporting is satisfactory.

2. Part 21 Reports

No 10 CFR 21 reports were issued by the licensee during this evaluation period.

C. Licensee Activities

Unit 1, Unit 2, and common facilities were reported by the licensee as being 90%, 43%, and 94% complete, respectively, as of December 1983. The Nuclear Test Section progress was reported as 30% complete.

Selected Milestones Occurring During this SALP Period

November 28, 1982	Completed Unit 2 structural concrete.
March 31, 1983	Completed CRD System water hammer modification design.
April 19, 1983	Completed site Guard House.
May 4, 1983	Unit 1 Circulating Water Pump House piping completed.
May 13, 1983	Completed Service Water Pump House Piping.
May 19, 1983	Completed Unit 1 cooling tower.
May 23-27, 1983	ASLB Evidentiary hearing on QA contention issue.
May 31, 1983	Completed Unit 1 protected area fence except for construction access gaps.
May 31, 1983	Completed radiation shield analysis and design.

July 1, 1983	Completed Radwaste Building piping.
August 1, 1983	Completed Unit 1 Emergency Response Information System design.
August 1, 1983	Completed Service Building excluding Technical Support Center and Calibration Lab.
August 5, 1983	Completed construction of Emergency Off-Site Facility.
August 28, 1983	Suppression Pool initial fill.
September 1, 1983	Unit 1 Condensate Filter Demineralizer System operational.
October 6, 1983	Completed Unit 2 Containment Dome concrete.
October 12, 1983	Completed initial flush and run in of Unit 1 ECCS pumps.
October 21, 1983	Completed Unit 2 Cooling Tower veil.
November 29, 1983	Completed the shore protection breakwall.
December 2, 1983	ASLB issued decision on QA contention.
December 12, 1983	Completed construction of site training center.
December 14, 1983	Completed Unit 1 Turbine Power Complex construction activities.
December 15, 1983	Completed hydrotest of Unit 1 CRD hydraulic lines.

D. Inspection Activities

During this assessment period, a total of 44 inspections were conducted at the Perry Site. A Construction Appraisal Team (CAT) inspection was performed during the period August 22 - September 2 and September 12 - 23, 1983. The results of the CAT inspection are discussed in Section IV of this report. The NRC Caseload Forecast Team met with the licensee on January 11-13, 1983, for the purpose of collecting data to assess the projected fuel load date for Unit 1. The team estimated that the earliest possible date for fuel load is December 1984.

E. Investigations and Allegations Review

Allegations were received during this assessment period concerning electrical and instrumentation construction activities, operator licensing, worker intoxication, QC inspector qualifications, protective coatings, and the construction quality control program. The majority of these allegations were reviewed which resulted in the identification of three noncompliances (Noncompliances (1), (2), and (3) which are tabulated under the functional area, Electrical Power Supply and Distribution).

F. Escalated Enforcement Action

There were no escalated enforcement actions during this assessment period.

G. Administrative Actions

1. Confirmatory Action Letters

None.

2. Management Conferences

The following management meetings were conducted during this period:

September 21, 1982	Management meeting to discuss the licensee's upgraded site design change control program (Report Nos. 50-440/82-12 and 50-441/82-11).
December 8, 1982	Management meeting held at the licensee's request to discuss changes in the Perry Project management organization, the scope and results of the INPO Self-Initiated Evaluation, and changes in the Regional Staff organization (Report Nos. 50-440/82-17 and 50-441/82-16).
January 14, 1983	Management meeting to present and discuss the results of the SALP 3 evaluation (Report Nos. 50-440/83-04 and 50-441/83-04).

October 31, 1983	Management meeting held at the licensee's request to discuss licensee proposed changes involving tightened employee work rules, the status of the investigation of the Moisture Separator event, the status of the Transamerica Delaval Diesel Generator deficiencies, and a proposed pre-turnover documentation package review (Report Nos. 50-440/83-34 and 50-441/83-33).

VI. Enclosures

Letter to Licensee From SALP Board Chairman

Licensee Comments

MAR 15 1984

Docket No. 50-440
Docket No. 50-441

The Cleveland Electric Illuminating
Company
ATTN: Mr. Murray R. Edelman
Vice President
Nuclear Group
Post Office Box 5000
Cleveland, OH 44101

Gentlemen:

This refers to our scheduled meeting on April 10, 1984, at 2:00 p.m. to discuss the NRC's Systematic Assessment of Licensee Performance (SALP) for the Perry Nuclear Power Plant for the period October 1, 1982 through December 30, 1983.

Mr. James G. Keppler and members of the NRC staff will present the observations and findings of the SALP Board. The more significant SALP Board findings are summarized in Enclosure 1. The enclosed SALP Report which documents the analyses, conclusions, and recommendations of the SALP Board is for your review prior to the meeting.

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. Any comments you may have regarding the SALP Report, as well as the SALP process, may be discussed at the meeting. Additionally, you may provide written comments within 20 days after the meeting.

Following our meeting and receipt of your written response, if any, the enclosed report will be issued. The letter issuing the report will provide you a characterization of your overall safety performance along with any appropriate supplemental information regarding the report.

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 comments, if any, will be placed in the NRC's Public Document Room when the SALP Report is issued.

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

Sincerely,

J. A. Hind, Chairman
Region III SALP Board
Director, Division of Radiological and Materials Safety Program

Enclosures:
1. Summary of Significant Findings
2. Preliminary SALP Report

cc w/encls:
Director, OIE
Resident Inspector, RIII
Project Manager, NRR
PAO, Region III

ENCLOSURE 1

Summary of SALP Findings for the Perry Nuclear Power Plant

Substantial construction activity has been underway at the Perry Nuclear Power Plant during this appraisal period. NRC inspection activity also increased substantially through the conduct of resident and regional inspections supplemented by a Construction Appraisal Team inspection. The latter effort involved approximately 2000 manhours of onsite inspection, with attention directed toward the adequacy of installed hardware at the site.

The Construction Appraisal Team found no pervasive failure to meet construction requirements. Findings of noncompliance were isolated in nature and the Team perceived a quality conscious attitude throughout the Perry project organization.

Intensive inspection effort was expended in the electrical area, an area not closely reviewed in the last SALP, and rated a Category 3 prior to that time. While several noncompliances were identified, the number is not excessive considering the depth of inspection, nor do the findings demonstrate any significant programmatic deficiencies.

Overall, one functional area is rated Category 1 and the remaining areas are rated Category 2 indicating adequate levels of management involvement and attention. No significant weaknesses were identified.

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MURRAY R. EDELMAN
VICE PRESIDENT
NUCLEAR

April 19, 1984

Mr. James G. Keppler
Regional Administrator, Region III
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

RE: Perry Nuclear Power Plant
Docket Nos. 50-440; 50-441
SALP Report

Dear Mr. Keppler:

This refers to our meeting in your offices conducted on April 10, 1984, to discuss the findings and observations of your staff which are reflected in the most recent SALP Evaluation for Perry Nuclear Power Plant Units 1 & 2. I would like to thank you and your staff for your overall evaluation of our activities for the period of the report (October 1, 1982 through December 30, 1983). The discussion with your staff at the meeting was very helpful to us.

In accordance with the SALP process, The Cleveland Electric Illuminating Company (CEI) submits the following comments:

We are in general agreement with the "Summary of Significant SALP Report Findings" contained in Enclosure 1. These comments and those in the SALP Report itself indicate to us that the SALP Board and NRC management recognize the strong commitment to quality being maintained by The Cleveland Electric Illuminating Company.

With respect to the ratings contained in Section III of the SALP Report:

A. The Category I rating in one functional area is appreciated. This recognition of good performance serves as added incentive to the Project Organization to maintain this level of performance.

B. We accept the ratings in all functional areas except Functional Area 7. With regard to the rating in "Licensing Activities", we would like to reiterate that this rating should be upgraded. As was discussed at the meeting, we also wish to offer additional information for Functional Areas 2, 9 and 10 to clarify specific issues raised in the SALP Report. Comments on these areas are contained in the next four items.

C. With regard to Functional Area 2, relative to identification of piping and pipe support/restraint deficiencies during Quality Control construction acceptance inspection or during the "as-built" verification program, these programs have been strengthened and are presently undergoing further refinement.

Relative to Information Notice 83-80, entitled "Use of Stiff Pipe Clamps", the following NRC concerns were detailed:

1. Piping designers must be aware of clamp-induced stresses on piping.

2. Post-installation control, i.e. special maintenance, of the clamp may be necessary where proper clamp function requires high values of torque on clamp bolting.

Although this issue is not expected to represent a problem at PNPP, the interest expressed by the NRC has necessitated the following action to address their specific concerns.

1. As our Architect/Engineer did not explicitly consider the effect of clamp-induced loads in past pipe stress analysis, an engineering evaluation is being undertaken to consider these effects using appropriate pipe clamp applications in PNPP ASME Class 1 piping systems.

2. The Nuclear Construction Engineering Section has taken steps to ensure that installation and maintenance requirements are transmitted to the Perry Plant Department Maintenance Section. In addition, special torquing equipment procured by the installation contractor will be transferred to Perry Plant Department upon completion of work.

D. As discussed at the meeting with regard to Functional Area 7, the SALP Report and rating on Licensing Activities are of concern since CEI takes pride in our commitment to timely, complete and accurate responses to the staff's technical questions and data requests. This commitment has been evidenced by the resolution of 37 outstanding technical issues (includes outstanding issues, confirmatory issues, and license conditions) in SER Supplements #2 and #3 and the submittal of responses which closed an additional 15 issues in Supplement #4. In addition, our responsiveness was also evidenced by our timely responses to staff requests for additional information in areas such as instrumentation and control system, quality assurance, power systems, and materials engineering. It should be noted that our responses to the technical requests in mechanical engineering, fire protection and equipment qualification areas, identified in the SALP report, were complete. Further information was promptly furnished following discussions with the staff in which supplemental requests and/or clarifications were provided.

Recent events - the successful environmental equipment qualification audit in January and the resolution of all outstanding fire protection issues in SER Supplement #4 - confirm the technical thoroughness and adequacy of CEI's responses to the staff's questions in these areas.

There is one characteristic of the Licensing process that should be recognized, i.e. the easy issues get resolved early, whereas the difficult/potentially big impact items take time to resolve. We are now in the latter position. The remaining issues require much work, produce divergent opinions on acceptable solutions between applicant and staff and often require discussions and meetings to define an adequate response. CEI has always been ready to meet with the staff to better understand their requests. As in the past, we will continue to maintain our philosophy of being responsive to the NRC in all phases of the licensing process.

E. With regard to Functional Area 9, relative to staffing of the Health Physics Unit, an individual with extensive BWR experience recently accepted the second Unit Supervisory position. Also, three additional technicians having commercial experience have been hired. To enhance the classroom training received by four other technicians, they have been sent to an operating power plant for three months of experience training. Additionally, the support offered by the Nuclear Design and Analysis Section has been enhanced by the hiring of the Corporate Health Physics Specialist.

Relative to the environmental program items discussed, installation of the loudspeaker warning system for Lake Erie boaters was started in mid-March and completion is projected for May 1, 1984. Corrective action for shoreline erosion occurring adjacent to the north parking lot was completed last year. General housekeeping in the barge slip area is an ongoing effort which receives appropriate attention seasonally.

F. With regard to Functional Area 10, concerning Nuclear Test Section activities, since the time of the referenced inspection during which the inspector observed that the system test engineers appeared to be overburdened with responsibilities, we have created a Systems Completion Group. This group has relieved the workload of the test engineer and lets him concentrate on testing instead of construction completion.

Additionally, the Turnover Control program and procedures have received much attention and are presently in the final stages of review to streamline and improve the system.

The Test Procedure Review Committee was not governed by a formal procedure or charter at the time of inspection. Since that time a formal procedure has been issued describing and governing committee activities.

My sincere appreciation again to you and your staff for their efforts on this SALP review.

Very truly yours,

M. R. Edelman
Vice President
Nuclear Group

MRE:pab

cc: Mr. M. L. Gildner
NRC Site Office

U.S. Nuclear Regulatory Commission
c/o Document Management Branch
Washington, D.C. 20555

Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555