June 25, 1982

Dockets: 50-313/81-36
50-368/81-36

Arkansas Power and Light Company
ATTN: Mr. William Cavanaugh III
Senior Vice President - Energy Supply
Post Office Box 551
Little Rock, Arkansas 72203

Gentlemen:

This refers to the Systematic Assessment of Licensee Performance (SALP) Board Report of the Arkansas Nuclear One, Units 1 and 2, facility. The SALP Board met on September 16, 1981, to evaluate the performance of the subject facility for the period July 1, 1980, through June 30, 1981. The performance analyses and resulting evaluation are documented in the enclosed SALP Board Report. These analyses and evaluation were discussed with you at your Arkansas Nuclear One offices on September 16, 1981.

The performance of your facility was evaluated in the selected functional areas identified in Section IV of the enclosed SALP Board Report.

The SALP Board evaluation process consists of categorizing performance in each functional area. The categories which we have used to evaluate the performance of your facility are defined in Section II of the enclosed SALP Board Report. As you are aware, the NRC has changed the policy for the conduct of the SALP program based on our experiences and the recently implemented reorganization which emphasizes the regionalization of the NRC staff. This report is the product of the revised policy.

Any comments which you may have concerning our evaluation of the performance of your facility should be submitted to this office within 20 days of the date of this letter. Your comments, if any, and the SALP Board Report, will both appear as enclosures to the Region IV Administrator's letter which issues the SALP Report as an NRC Report. In addition to the issuance of the report, this letter will, if appropriate, state the NRC position on matters relating to the status of your safety program.

Comments which you may submit at your option are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, PL 96-511.

OFFICE	ES	RPS-C	RPB2	RPB1	DPPR&EP	RA-RIV
SURNAME	DMHunnicutt/nh	REHall	WCSeidle	GLMadsen	JEGagliardo	JTCollins
DATE	6/22/82	6/[illegible]/82	6/[illegible]/82	6/[illegible]/82	6/[illegible]/82	6/[illegible]/82

Should you have any questions concerning this letter, we will be glad to discuss them with you.

Sincerely,

"Original Signed By
W. C. SEIDLE"

W. C. Seidle, Chief
Reactor Project Branch 2

Enclosure:
Appendix - NRC Report 50-313/81-36
50-368/81-36

cc w/enclosure:
Arkansas Nuclear One
ATTN: J. M. Levine, General Manager
Post Office Box 608
Russellville, Arkansas 72801

No distribution made

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APPENDIX

U. S. NUCLEAR REGULATORY COMMISSION
REGION IV

SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE (SALP)

Report: 50-313/81-36
50-368/81-36

Dockets: 50-313
50-368

Licensee: Arkansas Power and Light Company
P. O. Box 551
Little Rock, Arkansas 72203

Facility Name: Arkansas Nuclear One, Units 1 and 2

Appraisal Period: July 1, 1980, through June 30, 1981

Appraisal Completion Date: September 16, 1981

SALP Board Members: K. V. Seyfrit, Deputy Regional Administrator, Region IV
G. L. Madsen, Chief, Reactor Project Branch 1
D. M. Hunnicutt, Chief, Engineering Section
W. D. Johnson, Senior Resident Inspector, ANO
L. J. Callan, Resident Inspector, ANO
R. E. Martin, NRR, Project Manager, Unit 2
G. S. Vissing, NRR, Project Manager, Unit 1

Reviewed: D M Hunnicutt 6/23/82
D. M. Hunnicutt, Chief, Engineering Section Date

R E Hall 6/23/82
R. E. Hall, Chief, Reactor Project Section C Date

Approved: G L Madsen 6/23/82
G. L. Madsen, Chief, Reactor Project Branch 1 Date
(SALP Board Chairman)

I. INTRODUCTION

The NRC established a Systematic Assessment of Licensee Performance (SALP) program. This SALP program is an integrated NRC staff effort to collect available observations and data on a predetermined schedule and to evaluate licensee performance based on these observations and data. Emphasis is placed upon NRC understanding the licensee's performance in the 14 functional areas listed in the body of the report and discussing and sharing this understanding with the licensee. SALP is an integrated part of the regulatory process used to assure licensee's adherence to the NRC rules and regulations. SALP is oriented toward furthering NRC's understanding of the manner in which: (1) the licensee management directs, guides, and provides resources for assuring plant safety; and (2) such resources are used and applied. The integrated SALP assessment is intended to be sufficiently diagnostic to provide meaningful guidance to licensee management related to quality and safety of plant operation, modifications, and new construction.

This SALP Report is the SALP Board's assessment of the licensee safety performance at Arkansas Power and Light Company, Arkansas Nuclear One, Units 1 and 2 during the period of July 1, 1980, to July 1, 1981.

The results of the SALP Board assessments in the 14 selected functional areas were discussed with the licensee at a meeting held on September 16, 1981.

II. CRITERIA

Licensee performance is assessed in 14 selected functional areas. Each of these functional areas represents an area significant to nuclear safety and its related environment and is a programmatic area for the NRC inspection program.

Evaluation criteria as listed below was used, as appropriate, in each of the functional area assessments:

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

In addition, SALP Board members considered other criteria, as appropriate.

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

Category 1 - A combination of attributes which demonstrates achievement of superior safety performance; i.e, 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. Reduced NRC attention may be appropriate.

Category 2 - A combination of attributes which demonstrates achievement of satisfactory safety performance; i.e., 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. NRC attention should be maintained at normal levels.

Category 3 - A combination of attributes which demonstrates achievement of only minimally satisfactory safety performance; i.e., 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. Both NRC and licensee attention should be increased.

III. SUMMARY OF RESULTS

The SALP Board met at the Arkansas Power and Light Company's Arkansas Nuclear One offices on September 16, 1981. The Board's reviews, discussions, and evaluations of the licensee's performance in the 14 functional areas resulted in classifying the licensee's performance as: (1) Category 1 in the functional areas of Emergency Preparedness; Security and Safeguards; and Administration, QA Records, and Procurements; (2) Category 3 in the functional area of Surveillance and Inservice Testing; and (3) Category 2 in the other ten functional areas.

IV. Performance Analysis

A. Plant Operations

1. Analysis

This area has been inspected on a continuing basis by the resident inspectors. While no violations or deviations were identified concerning Unit 1 plant operations, the following five items were identified for Unit 2:

a. The unit was operated from August 20, 1980, through September 30, 1980, with two of the four containment cooling units inoperable (fouled with asiatic clam shells). (Infraction) (80-17)

b. The containment building was purged on September 4, 1980, without knowledge of the purge start time. (Infraction) (80-17)

c. The unit was operated in Mode 1 on October 15, 1980, with only one high pressure safety injection pump operable. One pump was out-of-service for maintenance, while the operability of another pump was degraded due to a missing access panel on the pump room air cooling unit. (Severity IV) (80-21)

d. Procedures were not followed with respect to the required lock on a Category E valve (2SW-17C) on October 16, 1980, and the required position of a motor operated valve (2CV-0706) on October 15, 1980. (Severity V) (80-21)

e. Two of the three charging pumps were not disabled as required by procedure during low temperature operations. (Severity V) (81-10)

Of the four licensee event reports (LER's) which could be attributed to plant operations, the three listed below were the most significant:

a. The level of the sodium hydroxide tank was permitted to be lowered to less than the minimum required value due to an operator error while performing a surveillance test on a reactor building spray pump. (Unit 1) (81-08)

b. The sodium hydroxide concentration in the sodium hydroxide tank fell below the required value due to a poorly seated reactor makeup water fill valve. (Unit 2) (80-69)

c. An emergency diesel generator tripped on reverse power due to an operator error. (Unit 2) (80-93)

2. Conclusion

The licensee is considered to be in performance Category 2 in this area. Regulatory performance, as reflected in the enforcement history, indicated some improvement over the initial SALP period.

NRC recognized the licensee's efforts to train personnel, including use of overtime to increase the available hours for personnel training.

3. Board Recommendations

The Board had some concerns related to the training of personnel, which should be monitored during future inspections. Staffing should be improved by training and requalification of personnel assuring that personnel are knowledgeable of applicable technical specifications and procedure requirements and by increasing the number of senior reactor operators (SRO's).

B. Refueling Operations

1. Analysis

Both units at Arkansas Nuclear One were refueled during this evaluation period. Inspections of refueling operations were performed by the resident inspectors and by regional inspectors.

One violation was identified during these inspections. A licensed operator (Unit 2) failed to record the neutron count rate after a fuel assembly was inserted into the core as required by procedures. (Severity V) (81-10)

Two LER's for Unit 2 involved refueling operations.

a. The spent fuel pool water level fell two feet below the required level when instrument air was secured and the spent fuel pool tilt pit gate seal deflated. (81-19)

b. Inspection of spent fuel revealed that some assemblies had suffered grid damage during fuel handling. (81-21)

2. Conclusions

The licensee is considered to be in performance Category 2 in this area. This conclusion is based, in part, upon the observation that there was no significant identified regulatory concerns in this area.

3. Board Recommendations

The licensee is encouraged to develop a more detailed formal training program prior to the next scheduled plant refueling. This training program should include: (1) applicable fuel handling procedures and (2) applicable technical specifications and emergency procedures.

C. Maintenance

1. Analysis

One inspection was performed in this area by a regional inspector, and inspections were performed on a continuing basis by the resident inspectors. One violation was identified in this area. A pipe support was found to be missing from a Unit 2 safety-related pipe. The support was presumed to have been removed during previous maintenance in the area and not replaced. (Severity IV) (81-03)

Eight LER's could be attributed to the maintenance area. The two most significant of these involved failures of diesel generators following maintenance.

a. A Unit 2 emergency diesel generator failed to start following maintenance due to incomplete venting of air from the fuel system. (81-16)

b. A Unit 1 emergency diesel generator failed to start during a surveillance test, and it was found that a blocking device in the auxiliary contacts of the loss of excitation relay had not been removed following maintenance. (81-07)

2. Conclusions

The licensee is considered to be in performance Category 2 in this area. Although a number of minor weaknesses are evident, regulatory performance has not been adversely affected.

3. Board Recommendations

A more inclusive preventive maintenance program could increase efficiency in this area. An improvement in the surveillance program and machinery history system appears to be important in light of the records related to the reactor coolant pump seals problems and the steam generator gasket problems. The Board's review and observation of these items indicated a need to improve retrieval and overall information related to the items.

D. Surveillance and Inservice Testing

1. Analysis

Four inspections were conducted in this area by regional inspectors, and inspections were performed by the resident inspectors on a continuing basis. Two violations were identified in this area for Unit 1 and five for Unit 2. In addition, one violation and two deviations common to both units were identified. These are summarized below:

a. The licensee failed to adequately control the access by construction personnel into an area where their activities had the potential to adversely impact the integrated leakage rate test. (Unit 1) (Severity VI) (81-05)

b. The interval between tests of the filters for the penetration room ventilation system exceeded 18 months. (Unit 1) (Severity IV) (81-06)

c. The surveillance procedures for the reactor protective instrumentation did not demonstrate operability. (Unit 2) (Severity V) (81-03)

d. A surveillance procedure for a high pressure safety injection pump was incorrectly completed, indicating the operation of a manual valve which was not installed. (Unit 2) (Severity V) (81-07)

e. Monthly channel checks were not performed as required on a Triaxial Time-History Accelerograph. (Unit 2) (Severity IV) (81-07)

f. An isotopic analysis for iodine was not performed as required. (Unit 2) (Severity V) (80-21)

g. The alarm/trip setpoint for the control room ventilation intake duct monitor was not set as required. (Unit 2) (Severity IV) (81-16)

h. Local leak rate testing of containment building penetrations was performed at pressures slightly lower than the required pressures. (Units 1 and 2) (Severity IV) (81-18; 81-16)

i. The licensee had not established a sampling program for five systems as committed in response to IE Bulletin 80-10. (Units 1 and 2) (Deviation) (80-18; 80-18)

j. The high range noble gas effluent monitor was not checked monthly and calibrated every three months as committed in response to NUREG-0578. (Units 1 and 2) (Deviation) (80-22; 80-22)

The three LER's listed below could be attributed to the surveillance area:

a. A surveillance test on the reactor building escape lock was not performed at the required frequency. (Unit 1) (80-29)

b. A surveillance test on the diesel fire pump battery bank was not completed within the required time interval. (Unit 1) (81-04)

c. Failure to perform nuclear instrument calibration within the prescribed time period. (Unit 1) (80-36)

2. Conclusions

The licensee is considered to be in performance Category 3 in this area. There appeared to be a need for "highlighting" certain technical specifications surveillance requirements that could identify items scheduled for completion. In addition, there appears to be a need for more attention to details and improvements in management and procedural controls since several missed deadlines and schedules have been identified. An improvement in overall communications would be beneficial.

3. Board Recommendations

The licensee should perform close and detailed review of performance throughout the plant. Additional management controls in surveillance should be initiated. The NRC should increase the inspection program until improvements have been demonstrated by the licensee.

E. Personnel, Training, and Plant Procedures

1. Analysis

Two inspections were performed in this area by regional inspectors, and inspections were performed on a continuing basis by the resident inspectors. One violation common to both units and one violation for Unit 1 were identified in this area. These are summarized below:

a. Four licensed operators for Unit 1 and two licensed operators for Unit 2 had not reviewed the abnormal and emergency operating procedures within the frequency established by an ANO plant procedure. (Units 1 and 2) (Severity V) (81-06; 81-05)

b. The licensee's procedures were not adequately followed resulting in a violation which included three examples: (Unit 1) (Severity V) (81-06)

(1) Certain surveillance required by TS were not specified on the master test control list.

(2) A new procedure was issued without the proper cancellation of the superseded procedure.

(3) The hydrogen concentration instrument had not been calibrated within 18 months, as required.

Twelve LER's could be attributed to the personnel, training, and plant procedures area. The four most significant LER's are summarized below:

a. Two LER's involved personnel error in failing to establish a continuous fire watch when a fire barrier to a safety-related area was made inoperable. (Unit 1: 81-003) (Unit 2: 80-081)

b. The Unit 2 fire monitoring instrumentation was made inoperable due to personnel error causing the loss of instrument AC power. (80-073)

c. Unit 2 'C' and 'D' safety injection tanks (SIT) had boron concentrations below TS limits due to inadequate procedures. (80-044)

2. Conclusions

The licensee is considered to be in performance Category 2 in this area. The training facility is well laid out, contains the essential elements to fully utilize the building for training and emergency situations. The licensee has made considerable improvement in the general employee training and in on-the-job training. The licensee has placed the training records on a retrieval computer system.

3. Board Recommendations

The Board recommends close attention to training, particularly to training of reactor operators (ROs) and senior reactor operators (SROs).

F. Fire Protection and Housekeeping

1. Analysis

Two inspections were performed in this area by regional inspectors, and inspections were performed on a continuing basis by the resident inspectors. Two violations for Unit 2 were identified in this area. These are summarized below:

a. Two oxygen bottles and an acetylene bottle were stored in an area in the auxiliary building prohibited by plant procedure 1053.01, "Control of Combustibles." (Unit 2) (Severity V) (81-07)

b. A continuous fire watch was not stationed at the cable spreading room when the sprinkler system was inoperable. (Unit 2) (Severity IV) (81-10)

No LER's were attributed to fire protection and/or housekeeping.

2. Conclusions

The licensee is considered to be in performance Category 2 in this area. The licensee has engaged a contractor to decontaminate and improve the radiation background level in certain areas of the facility.

3. Board Recommendations

The Board recommends that the licensee place more emphasis on postwork cleanup and assure adequate training for all personnel that could be affected by a postulated fire or other related emergency. The licensee's fire monitoring system needs continuous management involvement to assure that appropriate training is conducted and to make the system fully functional as spurious alarms are still being encountered.

G. Design Changes and Modifications

1. Analysis

Four inspections have been conducted in this area by the resident inspectors. One violation was identified in this area for each unit. These are summarized below:

a. Some plant drawings in the Unit 1 control room were not marked to indicate pending design changes, even though the design changes had been completed. (Unit 1) (Severity V) (81-11)

b. Applicable procedures and drawings were not revised following the performance of Design Change Package 79-2036. (Unit 2) (Severity V) (80-21)

Five LER's could be attributed to the design changes and modifications area. The three most significant are summarized below:

a. Unit 2 refueling water tanks (RWTs) level indicator Channels A, C, and D were made inoperable due to level transmitters freezing. (80-91)

b. Unit 2 RWT level indicator Channels A and B were made inoperable due to the level transmitter sensing lines freezing. (81-09)

c. Unit 1 lead hydrogen purge supply fan failed due to a blown fuse caused by improper fuse size after system modifications. (80-41)

2. Conclusions

The licensee is considered to be in performance Category 2 in this area. A number of plant drawings are behind the current plant status. The licensee has not demonstrated significant improvement in this area during the last calendar year.

3. Board Recommendations

The licensee should identify the current status of plant drawings. Management and other plant groups should take appropriate action to alleviate this condition and maintain the plant drawings current when this goal has been initially achieved.

H. Radiation Protection

1. Analysis

Five inspections were performed during the evaluation period; an HP appraisal and four routine inspections by the Technical Inspection Branch. In addition, the resident inspectors conducted routine inspection. Three violations were identified by the appraisal team and two during branch inspection activities. These violations were:

a. Severity Level IV violation for failure to have written procedures covering required health physics activities. (Units 1 and 2) (80-20)

b. Severity Level IV violation for failure to ship radioactive waste in the proper container. (Units 1 and 2) (80-20)

c. Severity Level V violation for failure to properly label radioactive containers. (Units 1 and 2) (80-20)

d. Severity Level IV violation for failure to properly identify the contents of a radioactive shipment. (Units 1 and 2) (81-02)

e. Severity Level IV violation for failure to maintain survey records. (Units 1 and 2) (81-10 and 81-09)

During the evaluation period, the resident inspectors identified one violation that was common to both units and an additional violation for each of the two units. These items are summarized below:

a. The licensee failed to adhere to the procedural requirements for handling and monitoring laundered Anti-C clothing in controlled access areas. (Infraction) (Units 1 and 2) (80-15)

b. The licensee failed to evaluate the radiation levels associated with the high radiation area at the 317' level of the Unit 2 auxiliary building. (Severity IV) (Unit 2) (81-03)

c. A high radiation area near the bottom of the 'B' Core Flood Tank was not posted as a high radiation area. (Severity IV) (Unit 1) (81-08)

Four significant findings were identified during the health physics appraisal. These significant findings included the following items:

a. Chronic high airborne concentrations in the Unit 1 auxiliary building due to the lack of proper ventilation.

b. The location of the health physics department within the plant organization was such that the health physics supervisor (radiation protection manager) did not have direct recourse to responsible management and was not independent of station divisions concerned with station operability.

c. Personnel other than ANSI N18.1 qualified health physics technicians were used to provide health physics coverage during offshifts.

d. Collection, compaction, and movement of radioactive waste materials from radiation controlled areas were not properly controlled.

A management meeting was held on April 7, 1981, at the Region IV office to discuss the licensee's initial response to the health physics appraisal findings. As a result of the management meeting, the licensee agreed to modify some of their initial positions and provide a more timely completion date for certain findings. Recent inspection results indicate that the licensee has made good progress toward correcting the problem areas identified during the evaluation period. Corrective action has been completed for all violations. The licensee has maintained the established schedule of corrective action for the significant findings. A confirmatory measurements inspection was completed during the evaluation period. The results indicate that the licensee has the necessary capabilities in this area.

2. Conclusions

The licensee is considered to be in performance Category 2 in this area. During the two refueling outages completed during this SALP assessment period, few health physics problems occurred in the potential problem areas; e.g., modifications in high radiation zones, etc. The SALP Board review indicated significant improvement in the licensee's performance in this area over the initial SALP assessment period. Improvements were identified in ALARA commitments, decontamination work, use and control of Anti-C clothing, and upgrading and additions of personnel.

3. Board Recommendations

The Board recommends that the licensee further improve his performance, particularly in the areas of personnel staffing and training.

I. Environmental Protection

1. Analysis

One inspection was performed in this area by a regional inspector, and two inspections were performed by the resident inspectors. One violation was identified in this area. The licensee did not collect or analyze any samples of food crops during 1980. (Severity IV) (81-17 for Unit 1; 81-15 for Unit 2)

Three LER's could be attributed to this area:

a. The condenser Off-Gas Monitor 2RE-0645 was found to be inoperable. (Unit 2) (80-45)

b. The average gross gas release rate for the third quarter of 1980 was excessive. (Unit 1) (80-27)

c. The gross gas release rate was such that one MPC at the site boundary was exceeded, assuming worst case meteorology conditions. (Unit 1) (80-32)

2. Conclusions

The licensee is considered to be in performance Category 2 in this area.

3. Board Recommendations

None

J. Emergency Preparedness

1. Analysis

One emergency exercise was conducted during the evaluation period. The licensee's annual exercise was a joint exercise with the State of Arkansas and local governments. There were a total of 260 inspection-hours devoted to the exercise and public meetings. There were no items of noncompliance identified for this inspection. (Reports 50-313/81-13; 50-368/81-13)

2. Conclusions

The licensee is considered to be in performance Category 1 in this area. The licensee met the July 1, 1981, NRC requirement for warning systems. The licensee held a joint emergency preparedness exercise and demonstrated that personnel training and plant procedures were adequate to meet postulated emergencies. The licensee's attentiveness to schedules and the technical adequacy of the installed warning system and the demonstrated results of the joint exercise indicated an effective emergency preparedness program.

3. Board Recommendations

None

K. Security and Safeguards

1. Analysis

Four inspections have been performed by the Technical Inspection Branch, Physical Security Section, during the evaluation period. The resident inspectors made periodic tours of accessible vital areas. The following violations were identified:

a. A hasp on an opening to a vital area barrier was mounted in such a way that the metal screws could be backed out to disable the function of the lock to secure the door. (Infraction) (Unit 1) (80-13)

b. Certain circuitry can be tampered with and render a system incapable of normal operations. (Infraction) (80-13)

c. A certain switch was taped closed; thus, the requirements of Part 73.55(e)(2) could not be satisfied. (Infraction) (80-13)

d. Tests were not performed on certain alarms during a portion of February 1980. (Infraction) (80-31)

e. Guards on duty were not in possession of certain equipment. (Severity V) (80-19)

f. Certain information was omitted from a list on October 8, 1980. (Severity V) (80-19)

g. Roof hatches on intake structures were found to be unlocked. (Infraction) (80-11)

Except for items e and f, these violations were identified and were a part of the SALP discussions for the period of January 1, 1979, through August 19, 1980. Items e and f were identified during an inspection on October 6-9, 1980. Since that inspection, the licensee had demonstrated measurable improvement in the area of security. Region IV has verified the licensee's improvement by performing security program inspections in March 1981 (81/09-08) and June 1981 (81/19-18). Both of these inspections were free from identified violations or deviations. In addition, the other Region IV inspections have indicated many areas of improvement in security; e.g., cooperation between security and others, attitude of security personnel, rapid identification of minor problem areas such as incorrect times allocation for specified NRC badge holders, etc.

2. Conclusions

The licensee is considered to be in performance Category 2 in this area. The licensee has sound security programs with good support from Corporate Headquarters. The licensee has been responsive to NRC requirements and requests and has displayed a positive attitude towards the overall security program. The licensee demonstrated considerable improvement in this area when performance was compared with the original SALP assessment.

3. Board Recommendations

None

L. Audits, Review, and Committee Activity

1. Analysis

Four inspections were performed in this area by regional inspectors, and occasional inspections were performed in this area by the resident inspectors. One infraction common to both units was identified during inspection 80-16. This infraction consisted of two parts, as follows:

a. The Plant Safety Committee (PSC) had not reviewed the audit reports or the associated audit finding reports for six of the seven QA audits that were reviewed by the NRC.

b. Contrary to procedure, six deficiencies identified in the five checklists of Audit No. E80-4 (3/80) were documented on a single audit finding report.

2. Conclusions

The licensee is considered to be in performance Category 2 in this area. The licensee assigned a permanent PSC Chairman. This assignment is considered an improvement in this area.

3. Board Recommendations

None

M. Administration, QA Records, and Procurement

1. Analysis

Four inspections were performed in this area by regional inspectors, and this area was occasionally inspected by the resident inspectors. One violation was common to both units, and one violation was identified on Unit 1. One deviation was identified on Unit 2. These are summarized below:

a. Unable to retrieve a record of the alpha smears performed for month of January 1981. (Severity V) (Units 1 and 2) (81-08 and 81-07)

b. Shipment - Material Transaction Report (Form NRC-741) was not signed by receiver (3 forms not signed). Two NRC-741's were not dispatched within 10 days of receipt of material. (Severity VI) (Unit 1) (81-12)

c. Key to an access door to a high radiation area was determined not to have been removed from, and was still under the control of Plant Security instead of under administrative control of HP personnel. (Deviation) (Unit 2) (80-24)

2. Conclusions

The licensee is considered to be in performance Category 1 in this area. The licensee has placed the QA records on micro film. The retrieval system has been placed on a computer system. The licensee has shown measured improvement in this area when compared with the initial SALP assessment.

3. Board Recommendations

None

N. Corrective Actions and Reporting

1. Analysis

Two inspections were performed in this area by regional inspectors, and preplanned inspections were performed by the resident inspectors on an "as necessary" basis. One deficiency was identified on Unit 2 by the resident inspector's inspection program. 2P7A (emergency steam driven feedwater pump) was inoperable while testing in Mode 1 on July 23, 1980, and the licensee failed to submit an LER. (Deficiency) (Unit 2) (80-17)

2. Conclusions

The licensee is considered to be in performance Category 2 in this area. The licensee has shown measureable improvement in LER's during this SALP assessment period. The licensee demonstrated improvements in the clam shell problem, resolution of problems related to the service water system, the operating performance of the emergency feedwater turbine (2P7A), and by installing mechanical seals on the emergency feedwater pumps during the 1981 refueling outage for Unit 2.

3. Board Recommendations

The licensee reduced the out-of-service length of time for the Unit 2 condenser off-gas monitor and one of the two Unit 2 containment atmosphere monitors. Also, the number of annunicator and nuisance lights and alarms on the control room display panels appears to be excessive; therefore, additional effort should be expended to correct this apparent discrepancy. The three Unit 2 charging pumps are seldom available for service at the same time, due, in part, to spare parts problems and piping cracks induced in the charging pump piping by vibrations; the reliability of these pumps should be improved.

V. SUPPORTING DATA AND SUMMARIES

A. Noncompliance Data

1. See Attachment A

2. See Attachment B

B. Licensee Report Data

1. LER's

The Regional SALP Board reviewed the LER's for the period of July 1, 1980, through June 30, 1981. This review included LER's 50-313/80-24 through 80-41 and 81-01 through 81-08 for Unit 1 and 50-368/80-44 through 80-93 and 81-01 through 81-25 for Unit 2.

The classification and number of LER's during this report period (7/1/80 through 6/30/81) are listed as follows:

2. LER Evaluation Area

	Unit 1	Unit 2
Component Failure	15	53
Defective Procedure	4	3
Design/Fabrication Error	3	8
External Cause	0	1
Personnel Error	3	5
Other	2	5
TOTAL	27	75

a. The SALP Board reviewed the licensee's classification of each LER. The SALP Board did not identify any significant differences between the classifications made by the licensee and those made independently by the SALP Board.

b. Unit 1 causally-linked (repetitive) LER's were identified in the following areas:

(1) Steam driven emergency feedwater pump (P7A)

(2) In three separate LER's, the surveillance was not performed within the prescribed time period

(3) Hydrogen purge system

c. Unit 2 causally-linked (repetitive) LER's were identified in the following areas:

(1) Condenser off-gas monitor

(2) Charging pumps out-of-service due to component problems

(3) Charging pump piping cracks

(4) Refueling water storage tanks level transmitters froze

(5) Core protection calculator (CPC)

(6) Control element assemblies (CEA) failures

(7) Containment atmosphere (radiation monitors) - one out-of-service a large portion of the time

(8) Control room emergency chillers

In addition, the SALP Board indicated that due to the number of LER's, there was a generic concern in the area of emergency diesels.

3. Part 21 Reports

None

C. Licensee Activities

No significant activities.

D. Inspection Activities

No special inspection activities.

E. Investigation and Allegations

None

F. Escalated Enforcement Actions

1. Civil Penalties

None. A civil penalty was issued in October 1980; however, that civil penalty was discussed during the initial SALP period. The civil penalty was not related to the inspection activities for the current SALP review period.

2. Orders

None

3. Immediate Action Letters

None

G. Management Conferences Held During Past 12 Months

1. A management meeting was held in the Region IV offices on August 13, 1980, to discuss items that lead to the issuance of the civil penalty identified above. This meeting was not related to the current SALP review period.

2. A management meeting was held at the Region IV office on April 7, 1981. The purpose of this meeting was to discuss Arkansas Power and Light Company's response to the findings of the Health Physics Appraisal, conducted October 27 through November 7, 1980, (Reports 50-313/80-20 and 50-368/80-20) and to discuss the performance of the ANO Health Physics Program (Reports 50-313/81-15 and 50-368/81-14).

H. NRR Performance Summary

1. Unit 1 Overall Summary

The licensee is known to do the minimum that is required and not to go the "extra mile." On issues of high priority with the NRC, the licensee is considered average in performance. On issues of high priority to the licensee, the performance is above average. On issues which involve questions or requests for information on the initial submittals, the licensee's performance is considered below average. Overall NRR considered the licensee's performance at Unit 1 to be slightly less than Category 2.

2. Unit 2 Overall Summary

In most, but not all, instances the licensee will do the minimum required and does not generally have the spirit of "going the extra mile." On issues of high priority with NRC not involving plant shutdown considerations, the licensee rates average overall. On issues of high priority to the licensee, the performance is usually aggressive.

Considering all aspects of performance, NRR considered the licensee to be in performance Category 3 at Unit 2, but to have the potential to improve substantially given further staff resources.

I. NRR Performance Evaluation

1. Facility Data

Facility: Arkansas Nuclear One, Unit No. 1

Project Manager: Guy S. Vissing

Appraisal Period: July 1, 1980, through June 30, 1981

a. Performance Elements

(1) Quality of Responses and Submittals

Initial responses and submittals for this reporting period were usually of good quality. Exceptions to this include the request for Technical Specification (TS) changes related to the clam shell problem, the request for TS changes related to the degraded grid voltage issue, and the initial submittal related to the refueling documentation. The proposed TS related to the clam shell problem required revision; the submittal regarding the TS for the degraded grid voltage issue did not completely address the initial request; and the initial submittal related to the refueling was not complete (due to the vendor's late submittal to the licensee). It appears that much of the licensee's effort has been concentrated on the TMI action plan issue. Responses on this issue have been good.

(2) Efforts Required to Obtain an Acceptable Response on Submittal

Initial response on particular issues are usually within the requested time period. However, this is not the case for requests for modifications to submittals or for additional information. We have had inordinate delays in obtaining additional information on specific issues; such as the TS for anticipated reactor trip (ART) issue, the TS related to the clam shell problem, the TS for the H_2/O_2 concentrations in the waste gas system, the TS for the degraded grid voltage issue, and the reliability of the ICS. Also, there has been a long delay in resolving the issue on the set point changes in the reactor protection system due the propagation of errors in the instrumentation.

With respect to the documentation of the last refueling, the licensee was short in anticipating the NRC needs relating to the failing fuel problem. Only after the staff's insistence did the licensee commit to a program of investigation into the failed fuel problem.

(3) Working Knowledge of Regulations, Guides, Standards, and Generic Issues

We believe the licensee's staff has a generally good working knowledge of the regulations, guides, standards, and generic issues. However, we note the licensee's tendency to do the minimum which is required regarding regulations, guides, and standards.

(4) Technical Competence

We believe this is the area of greatest need for improvement. The technical depth of the licensee's staff, both at the plant site and the Little Rock Corporate Offices, is shallow. The licensee depends upon a few knowledgeable people to carry the increased workload since the TMI-2 accident. Consequently, responses to issues become late. In addition, the licensee has lost experienced people on their licensing staff which has affected the output.

(5) Conduct of Meetings with NRR

The licensee's presentation at the meeting of October 22, 1980, concerning the clam shell problem and the differential once through steam generator (OTSG) level was considered excellent. The licensee was well prepared and appeared to have good analyses and plans to resolve the problems. The licensee was very responsive to our concerns related to the qualifications of operations of operators at the meeting of May 1, 1981, with the Operator Licensing Branch. The licensee had a leading roll in the meeting of September 4, 1980, concerning the multiplant program on the emergency feedwater (EFW) upgrade. The meeting resulted in our acceptance of the conceptual design of the proposed EFW upgrades. At the meetings of August 21 and December 16, 1980, concerning the abnormal transients operating guideline (ATOG) program, the licensee was the lead in presenting a very well planned program which would lead to a methodology of procedure development and training for operator actions. However, as a

result of the discussions at these meetings, we are concerned if the licensee fully anticipates the NRC needs for the program with respect to Item I.C.1 of the TMI-1 Action Plan.

(6) Long-Standing Open Items

Most, if not all, of the long-standing multiplant issues which are still open are the result of the staff's action and not the licensee's inaction. The most significant items which are still open because of the licensee's action include the degraded grid voltage/adequacy of electrical distribution system issue, TS for ARTS, TS for the clam shell problem, and TS for the waste gas system.

(7) Organization and Management Capabilities

Although the licensee has shown some improvement in the management and organization activities, we believe the licensee needs greater improvement in providing the resources and qualified personnel to handle licensing actions, both at the corporate office and the plant site. Responses to licensing actions are delayed primarily because of logistics. The plant site is 70 miles from the corporate offices and most responses to issues require the technical input or concurrence from the plant staff. At times it is difficult for the licensing staff to command the attention of the plant management and technical staff on licensing issues.

It would be more productive to have the major management and organization, including the engineering related to the nuclear activities, located at the plant site. At a minimum, we believe the licensee should have a plant management and staff dedicated to licensing activities or, at the least, to have a licensing organization representative located at the plant site. We believe the licensee lacks technical depth both at the plant site and the corporate office commensurate with operating two diverse and complex nuclear facilities.

(8) Results of Operator Licensing Examinations

Results of operator licensing examinations showed a denial rate for ANO-1 operators of 69%. This is above the industry average denial rate. Specific weaknesses were observed in the ability to completely answer questions and to address the specific point required by an exam question. The results of oral examinations were less than or equal to the industry average.

(9) Performance on Specific Issues

Performance on issues related to the TMI Action Plan have generally been good. This includes the implementation of the safety grade ART, the TS for the Lessons Learned issues, the response for the EFW upgrade, and the responses to NUREG-0737. Responses to our request concerning redundancy for decay heat removal and operability TS were good. Performance concerning the degraded voltage TS issue and the waste gas system H_2/O_2 TS concern was less than satisfactory.

b. Observed Trends in Performance

The working relationship of the licensee's staff with the NRC staff during this period has been very good. Responses to initial requests are usually prompt and reasonably complete

However, the day-to-day telephone request on issues do not receive the same priority as written requests. Thus, issues not initially complete tend to remain open for great lengths of time. We note that the licensee is not a leader in the resolution of multiplant issues involving the B&W owners group. The licensee tends to stand back and wait for developments of programs rather than aggressively establishing programs and schedules for resolving issues. The licensee tends to report the minimum required.

c. Notable Strength and Weaknesses

The licensee's strength lies with a few highly technically qualified and dedicated people. The licensee's weakness is the lack of technical depth and the separation of the licensee's management and staff in the corporate offices from those at the plant site.

J. NRR Performance Evaluation

1. Facility Data

Facility: Arkansas Nuclear One, Unit No. 2

Project Manager: R. E. Martin

Appraisal Period: July 1, 1980, through June 30, 1981

a. Performance Elements

(1) Quality of Responses and Submittals

About 20% of the responses and submittals are of poor quality, 60% are of medium quality, and about 20% are of excellent quality.

Examples of poor quality initial submittals may be found in the Cycle 2 Reload Report wherein a number of changes to the TS are requested, many with little or virtually no supporting discussion of the safety consequences or reason for the change. This was substantially resolved in discussion with the plant staff.

Examples of medium quality submittals are numerous in the Cycle 2 Reload Report and in many responses to staff generic letters and multiplant action items.

Examples of excellent submittals may be found in (1) many of the extensive responses made to the Cycle 2 Reload Report questions on thermal hydraulic methodology and the core protection calculator system software, and (2) the description of and responses to the September 1980 service water system fouling problem.

(2) Efforts Required to Obtain an Acceptable Response

(a & b) Timeliness and Effort

If an issue relates to restricting plant operation, shutting the plant down, or preventing startup, the effort required by NRR to get the response submitted is limited to telling the licensee what the response should address. The licensee nearly always responds in a timely manner with good to high quality technical content to these issues.

For other issues, the staff must be much more persistent in following up on the status of issues in order to get a response.

(c) Responsiveness to Staff Requests

Generally the licensee goes only as far as required by the staff. Responses to informal requests on matters of a nonurgent nature tend to come back slowly and only after repeated questions on the status of the item.

(d) Anticipates or Reacts to NRC Needs

The licensee generally does not anticipate sufficiently the need for action on NRR-related needs; rather, they wait until NRR acts and then react. The licensee does not protect its interests or represent itself as well with its defensive or reactive approach as it could if it took a more anticipatory or offensive approach.

(3) Working Knowledge of Regulations, Guides, Standards, and Generic Issues

The licensee's staff has a generally good working knowledge in this area. However, the licensee generally tends to interpret these things in a manner which requires the minimum action on their part.

(4) Technical Competence

For these purposes, technical competence is defined as:

(a) A sufficient number of people with
(b) significant experience who are
(c) striving for a high degree of technical and administrative performance.

Within all of the issues covered by the SALP program, the licensee has the greatest need for improvement in (a) and (b) above. There is ample evidence that the people at AP&L strive for item (c), but there are not enough people and experience remains short due to staff turnover.

The offsite support group is making a valiant effort to keep up with the tremendous quantity of work generated by the NRC requirements, but cannot respond to all issues in a timely manner. This group needs to be reinforced.

The onsite group is highly knowledgeable and very responsive. However, they depend on a few key people to carry the workload. Although they are apparently adequately staffed at present, insofar as addressing safety issues, this group does not have the margin to lose further staff capability without falling further behind.

The problems discussed above in items (1), (2)(a), (2)(b), (2)(c), and (2)(d) all appear to derive substantially from an insufficient number of people with significant experience.

(5) Conduct of Meetings with NRR

The licensee's presentation at the meeting of October 22, 1980, concerning the degradation of the service water system by silt, corrosion products, and clams was considered excellent. The licensee was very responsive to our concerns related to the qualifications of reactor operators at the meeting of May 1, 1981, with the Operator Licensing Branch. At both meetings, the licensee was well prepared, had thoroughly evaluated the issues, and had developed plans to resolve the problems.

On the other hand, during the numerous meetings with the licensee and the NSSS vendor, CE, concerning the Cycle 2 reload review of the reactor protection system's CPCS software, etc., the licensee's participation was noticeably more passive than was the NSSS vendor's. The licensee possibly does not protect its interests as well before NRC in this regard as they would if they participated in a more assertive fashion. It is apparent that the licensee operates in this manner simply because they do not have, at this time, sufficient staff resources to cover such issues as thoroughly as they might like.

The licensee is usually very cooperative in agreeing to meet with the staff whenever the circumstances call for a meeting.

(6) Long-Standing Open Items

Most, if not all, of the long-standing multiplant issues which are still open are dependent on the staff's action and not the licensee's inaction.

(7) Organization and Management Capabilities

It is apparent to the staff that as a result of recent licensee organization changes and their management's response to most recent issues, that the licensee has shown improvement in the management and organizational

capabilities. However, we believe that the licensee needs to provide additional resources and experienced personnel to support licensing actions, both in the offsite corporate office support group and in the onsite group.

There appears to be a considerable need to reinforce the offsite support group and to improve the degree of integration of the activities of the offsite and onsite groups. This would allow the offsite group the flexibility to keep up with activities onsite and would allow each of the groups to better support the other's efforts.

This is a problem which can be addressed best by the middle to upper level of AP&L management and does not reflect on the capabilities of the licensee's staff in the "working level" units of the offsite or onsite groups. The specific means used to accomplish an improvement in this area is best left to the licensee's management, but the improvement does need to be made.

(8) Results of Operator Licensing Examinations

Results of operator licensing examinations showed a denial rate above the industry average denial rate. Specific weaknesses were observed in the ability to completely answer questions and to address the specific point required by an exam question. A meeting was called by DHFS on May 1, 1981, at which the licensee described a program for increasing the emphasis on operator training. The August 1981 exam results should indicate the effectiveness of the licensee's upgraded training program.

(9) Performance on Specific Issues

(a) The licensee has responded as requested in a timely manner on at least the following issues:

- CEA Guide Tube Surveillance Program
- RCP & S. Gen. Support Fracture Toughness, C-06
- Overpressure Mitigation System
- Fuel Fission Gas Release
- Verification of CESEC Code
- Decay Heat Removal Tech Specs
- STS Definition of OPERABLE

(b) The licensee has responded slowly on the secondary water chemistry monitoring TS.

(c) The licensee's approach to utilizing the CPCS/plant computer system interconnection data links could have benefitted from clearer communication between the licensee and the staff on this issue.

(d) The licensee's response and corrective action to date on their September 1980 service water system fouling from clams and silt has been thorough and aggressive.

(e) The licensee took a significant risk of not having NRC approval for Cycle 2 operation approved in a timely manner by waiting until the standard 90 days prior to refueling shutdown before submitting the core reload report which included unapproved thermal hydraulics methodology, the usual transient and accident analysis, and numerous changes.

(f) The licensee's response on the emergency feedwater system review has been rather nonaggressive and stretched out over a long period.

(g) NUREG-0737 responses range from some good technical responses to some weak responses. Most are of average quality.

b. Observed Trends in Performance

The licensee's attitude and approach toward NRR and regulatory issues has been more cooperative and more positive than in previous years. Working relationships between the licensee's staff and NRR staff have usually been effective.

In evaluating the overall trends in the performance of this licensee, the staff notes that the work required to be done by the licensee has been as great in the last year as for any time since the TMI accident. This has required tremendous investments of the licensee's resources in issues such as NUREG-0737, environmental qualification, fire protection, FSAR update, emergency plan development and implementation, numerous NRR generic letters, and an extensive reload review. The licensee, with a small staff, has met the basic regulatory requirements during this very challenging period. The staff feels that given some strengthening of the onsite and offsite support groups and a settling down of the regulatory requirements and issues, the licensee has a very realistic opportunity to further improve their performance.

c. Notable Strengths and Weaknesses

The licensee's strength lies with a few highly technically qualified and dedicated people. The licensee's weakness is the lack of technical depth and the need to integrate the licensee's management and staff functions in the corporate offices with those at the plant site to a greater degree.

ATTACHMENT A

I. Number and Nature of Enforcement Items - Operating Reactors

Facility Name: Arkansas Nuclear One - Unit 1

Inspection Reports 80-12 through 80-25
81-01 through 81-19

Functional Area	Investigation & Inspection Manhours	Noncompliances and Deviations Severity Level						Classification* Vio.	Inf.	Dev.
		I	II	III	IV	V	VI			
1. Plant Operations										
2. Refueling Operations										
3. Maintenance										
4. Surveillance & Inservice Testing					1 + (1)		1			(2) Def.
5. Personnel, Training & Plant Procedures						1 + (1)				
6. Fire Protection & Housekeeping										
7. Design Changes & Modifications						1				
8. Radiation Protection, Radioactive Waste Management & Transportation					1 + (3)	(1)			(1)	
9. Environmental Protection							(1)			
10. Emergency Preparedness										
11. Security & Safeguards						(2)			1 + (4)	
12. Audits, Reviews & Committee Activity									(1)	
13. Administration, QA Records, Procurement						(1)	2			
14. Corrective Actions & Reporting										
SUBTOTALS					2+(4)	2+(5)	3+(1)		1+(6)	(2) Def.
TOTALS							8+(16)			

Note: Numbers in parenthesis indicate noncompliances common to both ANO Units.

ATTACHMENT B

I. Number and Nature of Enforcement Items - Operating Reactors

Facility Name: Arkansas Nuclear One - Unit 2
Inspection Reports 80-11 through 80-25
81-01 through 81-18

Functional Area	Investigation & Inspection Manhours	Noncompliances and Deviations Severity Level						Classification*		
		I	II	III	IV	V	VI	Vio.	Inf.	Dev.
1. Plant Operations					1	2			2	
2. Refueling Operations						1				
3. Maintenance					1					
4. Surveillance & Inservice Testing					2 + (1)	3				(2) Dev.
5. Personnel, Training & Plant Procedures						(1)				
6. Fire Protection & Housekeeping					1	1				
7. Design Changes & Modifications						1				
8. Radiation Protection, Radioactive Waste Management & Transportation					1 + (3)	(1)			(1)	
9. Environmental Protection							(1)			
10. Emergency Preparedness										
11. Security & Safeguards						(2)			(4)	
12. Audits, Reviews & Committee Activity									(1)	
13. Administration, QA Records, Procurement						(1)				1 Dev.
14. Corrective Actions & Reporting									1	
SUBTOTALS					6+(4)	8+(5)	(1)		3+(6)	1+(2) Dev.
TOTALS						17+(16)				

Note: Numbers in parenthesis indicate noncompliance common to both ANO Units.