APPENDIX

U. S. NUCLEAR REGULATORY COMMISSION
REGION IV

Systematic Assessment of Licensee Performance

Report: 50-313/83-22
50-368/83-22

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, 1982, through June 30, 1983

Licensee Meeting: October 14, 1983

SALP Board Members:

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I. INTRODUCTION

The NRC has established a Systematic Assessment of Licensee Performance (SALP) program as 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 12 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.

The integrated review was conducted by a SALP Board composed of NRC personnel who are knowledgeable of the licensee's activities. The SALP Board met on August 16, 1983, to review data and observations and to assess the licensee's performance in 12 areas. This SALP report is the SALP Board's assessment of the licensee's safety performance at Arkansas Power and Light Company, Arkansas Nuclear One, Units 1 and 2, during the period of July 1, 1982, through June 30, 1983.

The results of the SALP Board assessments in the selected functional areas were discussed with the licensee at a meeting held on October 14, 1983.

II. CRITERIA

Licensee performance was assessed in 12 selected functional areas. Each of these functional areas represents an area significant to nuclear safety. Evaluation criteria as listed below were 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 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

In summary, the licensee's performance, as determined during the SALP Board meeting, is shown in the table below, along with the performance category from the previous SALP evaluation period:

SUMMARY OF RESULTS

Functional Area	Performance Category This Evaluation Period (July 1,1982-June 30,1983)	Performance Category Previous Evaluation Period (July 1, 1981 - June 30, 1982)
A. Plant Operations	2	3
B. Radiological Controls		
1. Radiation Protection	2	2
2. Radwaste Systems Effluent Releases, and Effluent Monitoring	1	Not Assigned
3. Transportation Activities/ Solid Radwaste	1	Not Assigned
4. Confirmatory Measurements, Chemistry/Radiochemistry	Not Assigned	Not Assigned
5. Environmental Monitoring	Not Assigned	Not Assigned

C.	Maintenance	3	3
D.	Surveillance	2	3
E.	Fire Protection	3	2
F.	Emergency Preparedness	2	3
G.	Physical Security	1	2
H.	Refueling	2	Not Assigned
I.	Licensing Activities	2	2
J.	Training	2	2
K.	Quality Assurance	2	Not Assigned
L.	Management Controls	2	3

The total NRC inspection effort during this SALP evaluation period consisted of 33 inspections involving a total of 2,674 hours onsite by NRC inspectors.

IV. Performance Analysis

A. Plant Operations

1. Analysis

This area has been inspected on a continuing basis by the NRC resident inspectors. The two violations below involve activities in the functional area of plant operations:

a. Miscellaneous information sources that were used for direct plant operation, maintenance, and evaluation were not properly controlled. (Unit 2, Severity V, 8303)

b. A locking device was not adequately installed on a manual service water valve. (Unit 2, Severity V, 8314)

The three Licensee Event Reports (LERs) listed below involve activities in the functional area of plant operations:

a. The condensate storage tank level decreased below the Technical Specification low limit due to excessive use during plant startup. (Unit 1, 82-019/03L-0)

b. Containment integrity was violated during plant cooldown when instrument air manual isolation valves were opened to provide breathing air to maintenance personnel. (Unit 1, 82-023/03L-0)

c. Inadequate venting of the reference legs of two safety injection tank (SIT) level transmitters resulted in erroneous low level indications. This resulted in the SIT level and pressure Technical Specification limits being exceeded when the operators attempted to fill the SIT to restore level. (Unit 2, 82-034/03L-0)

2. Conclusions

The licensee has made substantial improvements in this functional area, but the violations that have occurred are an indication that continued management attention is required. The number of nuisance alarms in the control rooms has been greatly reduced, thus promoting operator efficiency. The licensee has also made significant progress in ensuring that the control room operators are provided updated drawings and procedures that reflect current status of design changes. Notable, also, is the apparent improvement in the experience and knowledge levels of the Unit 2 licensed operators, which has contributed to a significantly improved plant availability record during this SALP period. This, in turn, has resulted in correspondingly fewer challenges to Unit 2 safety systems due to plant trips.

The licensee has implemented new, function-oriented emergency procedures for Unit 1, making them an industry leader in that respect. The SALP Board encourages the licensee to expeditiously implement similar emergency procedures for Unit 2.

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

3. Board Recommendations

a. Recommended NRC Actions

The NRC inspection effort in this functional area should remain at its present level.

b. Recommended Licensee Actions

Increased management involvement in the conduct of plant operations, including increased management inspections of safety systems and components, is recommended. Additionally, licensee management should more actively encourage the obtaining of operator licenses (reactor operator and senior reactor operator) by members of plant management at the superintendent and manager level.

B. Radiological Controls

Five inspections were conducted during the assessment period by region-based radiation specialist inspectors involving 310 onsite inspection hours. The five inspections included: two radiation protection - operations; two radiation protection - refueling; and one radwaste management inspection. Followup actions for transportation activities were examined during the above inspections. The resident inspectors also spent approximately 147 hours reviewing radiological controls as part of their routine inspection program. The following specific areas are included within the general functional area of radiological controls:

1. Radiation Protection

a. Analysis

Three violations were identified regarding radiation protection activities. These violations were:

(1) failure to perform whole body counts for workers that exceeded the MPC-hours specified in plant procedures (Both Units, Severity Level V, 313/8236 and 368/8237)

(2) failure to update FSAR to indicate current radiation levels (Unit 1, Severity Level V, 8236)

(3) failure to follow plant procedures regarding the labeling of 55-gallon drums containing radioactive material (Unit 1, Severity Level V, 8210)

Eight new open items were identified and 11 existing open items were closed during the assessment period.

The average man-Rem for both Units for calendar year 1982 was 401. This is below the 1982 PWR national average of 578 man-Rem. However, a preliminary review of the licensee's 1983 man-Rem data indicates that the licensee will likely exceed the 1983 national average. As of May 31, 1983, the licensee's 1983 average for both Units was approximately 513 man-Rem. The increased 1983 exposures appear to be the result of several special maintenance jobs and not an indication of poor health physics practices.

An inordinate number of skin contamination on workers exiting radiation controlled areas occurred during the assessment period. Between October 1, 1982, and March 31, 1983, about 600 workers were found to be contaminated. The

licensee completed several special maintenance jobs involving a large number of radiation workers during this period, but the high number of skin contaminations is an indication of poor work practices. It was also noted that there were a number of minor violations of plant health physics procedures. These minor violations included such items as strict adherence to step-off pad and contamination controls.

The licensee's enforcement history during this assessment period and during previous inspection has been acceptable. Major violations are rare and not indicative of programmatic breakdown. Several minor violations have been identified, indicating a need for strict enforcement of health physics procedures and additional oversight by health physics supervision.

Adequate staffing has been maintained within the health physics department. Position descriptions have been issued with authorities and responsibilities defined. Vacant positions are filled in a timely manner. Occasional overtime by the health physics staff is necessary to provide non-routine jobs coverage.

An excessive number of skin contaminations and violation of health physics procedures indicate a need to review the effectiveness of health physics training for radiation workers. A coordinated effort between the training and the health physics departments is needed to ensure that material covered during training sessions is properly implemented at the work site.

Several NRC concerns continue to exist regarding the licensee's ALARA program. The licensee had developed a detailed ALARA program at the working level. However, licensee management has not taken an active role in the review of quarterly ALARA performance and problem area reports to ensure that a proper ALARA program is implemented.

The licensee's response to NRC initiatives has been accomplished in a timely manner. The response to the violation involving whole body counts for workers that exceeded specified MPC-hours was considered inadequate. However, the licensee's overall response to NRC initiatives has been acceptable.

No significant problems were identified during the assessment period in the areas of organization, staffing, personnel qualifications, exposure control, posting and area controls, surveys, notifications and reports, facilities and equipment, and audits.

b. Conclusions

The licensee's overall performance in radiation protection is considered improved when compared to the 1981-82 assessment period. However, several concerns exist which need management attention.

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

c. Board Recommendations

(1) Recommended NRC Actions

The NRC inspection effort in this area should continue at a normal level.

(2) Recommended Licensee Actions

. Increased management overview is needed by supervision within the health physics department to ensure strict compliance with established health physics procedures.

. The excessive number of skin contamination on workers indicates a need to review the effectiveness of health physics training.

2. Radwaste Systems, Effluent Releases, and Effluent Monitoring

a. Analysis

One inspection covering the areas of effluent releases, effluent monitoring, and liquid and gaseous radwaste systems was conducted during the assessment period. No violations or deviations were identified during this inspection. Three existing open items were closed and no new open items were identified during the assessment period.

An open item (313/8212-03)/(368/8225-03) was identified in early 1982 involving the lack of a formal training program for chemistry/radiochemistry personnel. A review of this item during a 1983 inspection revealed that the licensee had not established a formal training program.

The licensee's program regarding management involvement and control, resolution of technical issues, responsiveness to NRC initiatives, reports, staffing, audits, and adherence to procedures is considered adequate.

b. Conclusions

The licensee's past performance level in this area has been consistently high. No specific problem areas have been identified.

The licensee is considered to be in performance category 1 in this area.

c. Board Recommendations

(1) Recommended NRC Actions

Reduced NRC attention may be appropriate in this area.

(2) Recommended Licensee Actions

A formal training program should be established and implemented for chemistry/radiochemistry personnel.

3. Transportation Activities/Solid Radwaste

a. Analysis

One violation was identified during this assessment period involving the offsite shipment of radioactive material without proper shipping name, identification number, radiological information, and shipper certification (Unit 1, Severity Level IV, 8306).

The above violation involved the shipment of a contaminated valve to an offsite vendor for maintenance. The special shipment was made during offnormal hours by personnel not familiar with shipping requirements. The shipment was not coordinated through the radwaste coordinator.

Followup inspection efforts were expended tracking several open items identified in NRC Inspection Reports 50-313/82-14 and 50-368/82-11. Eleven previously identified open items were closed and only one new open item was identified during the assessment period.

Several new transportation regulations involving 10 CFR 20.311, 10 CFR 61, and 10 CFR 71 will be issued in late 1983 which must be included in the licensee's procedures.

Since the 1981-82 SALP period, the licensee has made considerable improvements in the transportation/solid radwaste area. These improvements included such items as increased management oversight, training and retraining programs, staffing, QA controls, radwaste volume reduction, audits, and revision of existing procedures.

b. Conclusions

The licensee has shown significant improvement in this area when compared to the program that existed in the 1981-82 assessment period. The licensee has implemented corrective actions for the concerns discussed in the 1981-82 assessment period.

The licensee is considered to be in performance category 1 in this area.

c. Board Recommendations

(1) Recommended NRC Actions

The board recognizes the improvements that have been made in this area. However, the Board recommends that NRC attention be maintained at normal levels until the licensee's program has been reviewed to ensure compliance with new regulations.

(2) Recommended Licensee Actions

The licensee's training program should be reviewed to ensure that all personnel that might be involved with offsite shipments are aware of transportation requirements.

4. Confirmatory Measurements, Chemistry/Radiochemistry

a. Analysis

Based on an evaluation of the licensee's past inspection history, an inspection was not performed for confirmatory and chemistry/radiochemistry activities during the assessment period. The previous confirmatory measurement inspection was conducted during May 24-27, 1982; the next inspection is scheduled for August 1983.

The 1982 confirmatory measurement results indicated greater than 80 percent agreement between the NRC's and the licensee's results for 72 individual radionuclide analyses.

Eight open items identified during the 1982 inspection are scheduled for followup review as part of the August 1983 inspection. No violations or deviations have been identified during previous confirmatory measurement inspections.

b. Conclusions

Since this area was not inspected during the assessment period, no performance category rating is assigned. The results of the scheduled August 1983 inspection will be used to establish the level of NRC attention for future inspections.

c. Board Recommendations

(1) Recommended NRC Actions

The Board has no specific recommendations in this area.

(2) Recommended License Actions

The Board has no specific recommendations in this area.

5. Environmental Monitoring

a. Analysis

An environmental monitoring inspection was not conducted during the assessment period. The previous inspection was performed during April 1982. The next inspection is scheduled for the third quarter of 1983.

Three unresolved items were discussed in the 1982 inspection report regarding minor problems with the existing environmental monitoring program. Corrective action for these three items was delayed pending implementation of the new radiological effluent environmental Technical Specifications (NUREG-0472).

Based on the results of previous inspections, the licensee performance has been adequate in the areas of management involvement and control, resolution of technical issues, responsiveness to NRC initiatives, enforcement history, reporting, and staffing.

b. Conclusions

Since this area was not inspected during the assessment period, no performance category rating is assigned. The licensee's past performance level in this area has been consistently high; therefore, continued reduced NRC attention may be appropriate depending on the evaluation of the 1983 inspection results.

c. Board Recommendations

(1) Recommended NRC Actions

The board has no specific recommendations in this area.

(2) Recommended Licensee Actions

The Board has no specific recommendations in this area.

C. Maintenance

1. Analysis

This area has been inspected by region-based NRC inspectors and on a continuing basis by the NRC resident inspectors. One violation was identified in this functional area. This violation resulted from the licensee's use of an inadequate maintenance procedure to repair the motor-driven emergency feedwater pump. (Unit 1, Severity IV, 8310)

The 19 LERs listed below involve activities in the functional area of maintenance:

a. Reactor trip breaker failures caused by inadequate maintenance procedures are described in the following causally-linked LERs:

Unit 1, 82-016/03L-0
Unit 1, 82-022/03L-0
Unit 1, 82-024/03L-0

b. Control valve failures related to an inadequate preventive maintenance program or to poor work practices during corrective maintenance are described in the causally-linked LERs listed below:

Unit	LER No.	Valve
1	83-008/03L-0	H2 purge system pressure control valve, PCV-7447
1	83-015/03L-0	High pressure injection block valve, CV-1219
2	82-025/03L-0	Emergency feedwater (EFW) block valve, 2CV-1036
2	82-036/03L-0	EFW pump isolation valve, 2CV-1062
2	82-038/03L-0	EFW control valve, 2CV-1076
2	82-046/03L-0	Main feedwater isolation valve, 2CV-1023
2	82-047/03L-0	EFW control valve, 2CV-1075

2	82-048/03L-0	EFW control valve, 2CV-1036
2	83-004/03L-0	EFW control valve, 2CV-1025
2	83-007/03L-0	EFW control valve, 2CV-1075
2	83-011/03L-0	EFW control valve, 2CV-1036
2	83-017/03L-0	Sodium hydroxide tank outlet valve, 2CV-5657

c. The following list of causally-linked LERs describe failures of the Unit 1 EFW pumps due to poor maintenance practices:

LER No.	Pump	Cause of Failure
83-010/03L-0	Turbine-driven EFW pump, P7A	Improper setting of balance drum clearances
83-011/03L-0	Motor-driven EFW pump, P-7B	Improper setting of balance drum clearances
82-013/03L-0	P-7B	Flow degradation caused by welder's glove lodged in suction of pump

d. An unqualified spare part was used during the repair of the standby hydrogen purge system pressure switch, PS-7503. This part (a diaphram) subsequently failed, rendering PS-7503 inoperable. (Unit 1, 83-009/03L-0)

2. Conclusions

The licensee's LER history indicates that corrective actions often are not timely or effective, and that an excessive number of events are repetitive. Although the licensee has established a preventive maintenance program for the various safety-related control valves in both units, the number of repeated failures in that area

indicates that the program may not be adequately implemented. Weaknesses in the licensee's maintenance procedures continue to be identified, and these procedural inadequacies have affected the operability of safety-related equipment. Documentation (maintenance history) of corrective maintenance actions is superficial and incomplete, making a management review for causally-linked events extremely difficult.

The licensee is considered to be in performance category 3 in this area.

3. Board Recommendations

a. Recommended NRC Actions

The level of NRC inspection in this functional area should be increased. This should be accomplished by increased inspections by NRC regional personnel to help identify programmatic weaknesses, and by increasing the sample size inspected by the NRC resident inspectors.

b. Recommended Licensee Actions

Increased management involvement is required in this area. Special attention should be given to ensuring that adequate procedures are available, and that on-the-job supervision is provided where necessary. The licensee should more aggressively seek out the root causes of equipment failures, ensuring that all troubleshooting and corrective maintenance activities are thoroughly documented as an aid for the resolution of future problems. The licensee should assess the effectiveness of the on-the-job training program and formal qualification program for maintenance personnel, and make the necessary modifications to ensure that personnel are being equipped with the proper maintenance skills.

It is significant to note that the 1982 SALP Report identified the lack of job supervision by first line maintenance supervisors and the lack of an effective preventive maintenance program for remotely operated valves as being prime reasons for the assignment of a performance category 3 for 1982 in this area. Improvement in the areas of job supervision and preventive maintenance of remotely operated valves is still required before significant progress can be made in the functional area of maintenance.

D. Surveillance

1. Analysis

This area has been inspected by region-based NRC inspectors and on a continuing basis by the NRC resident inspectors. The two violations below involve activities in the functional area of surveillance:

a. Two reactor building pressure transmitters were rendered inoperable as a result of inadequate return-to-service after a containment integrated leak rate test. Specifically, the plugs installed in their input sensing ports were not removed after the surveillance test was completed. This item was identified by the licensee and reported in LER 313/82-031/01T-0. (Unit 1, Severity III, Notice of Violation dated March 8, 1983). The licensee's prompt and thorough investigation of this event and the implementation of effective corrective action resulted in a mitigation by 50% of the ensuing Civil Penalty.

b. Technicians were using an improper technique when taking specific gravity readings on the station batteries. (Unit 1, Severity V, 8301)

The seven LERs listed below involve activities in the functional area of surveillance:

a. Temporary electrical jumpers were not removed from the trip contacts of the shutdown bypass high pressure trip bistables for 'A' and 'D' reactor protection system channels after completion of surveillance testing. (Unit 1, 82-025/03L-0)

b. The diesel-driven fire pump failed to start during surveillance testing due to a weak battery bank. The surveillance procedure was determined to be inadequate because it did not take into account the normal service life of the batteries. (Unit 1, 82-028/03L-0)

c. The following list of causally-linked Unit 1 LERs describe instances where the prescribed surveillance intervals and/or calibration setpoints were not adequate to ensure that certain safety-related pressure transmitters remained within Technical Specification tolerances:

LER No.	Safety Channels Affected
83-03/03L-0	Engineered Safeguards Actuation System (ESAS) Channels 1 and 2
83-04/03L-0	ESAS Channels 1 and 3
83-06/03L-0	Reactor Protection System (RPS) Channel B
83-07/03L-0	RPS Channels B and D

d. The instantaneous overcurrent relay for a containment spray pump was improperly calibrated, causing the spray pump to become inoperable (Unit 2, 83-016/03L-0).

2. Conclusions

The licensee has a well developed and effectively managed surveillance test program. The program ensures that current procedures are being used, that calibrated test equipment is being used, that surveillances are being performed in the required time intervals, and that new surveillance tests resulting from Technical Specification changes are implemented. The types of problems identified in the 1982 SALP Report relative to the licensee's failure to perform surveillance tests when required are no longer evident.

The number and type of violations and LERs in this functional area indicate that personnel involved in surveillance testing are not consistently providing the attention to detail that is required, and that surveillance procedures still need improvement in the areas of adequate technical detail and verification of proper return-to-service of components.

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

3. Board Recommendations

a. Recommended NRC Actions

The level of NRC inspection effort should remain consistent with the basic inspection program.

b. Recommended Licensee Actions

In order to help prevent errors like the failure to remove plugs from sensing ports of the Unit 1 reactor building pressure transmitters, additional management emphasis is needed to ensure that the personnel performing or supervising surveillance tests are thoroughly knowledgeable in the Technical Specification requirements, safety-significance, system interrelationships, and technical details of the systems that they are testing. Supervisory personnel should periodically review the technical adequacy of surveillance procedures, with emphasis on ensuring that the detail level of the procedures is compatible with the skill level of the personnel performing the procedures.

E. Fire Protection

1. Analysis

This area has been inspected by region-based NRC inspectors and on continuing basis by the NRC resident inspectors. The three violations below involve activities in the functional area of fire protection:

a. Excessive amount of combustibles were stored in the corridor to the Unit 1 emergency diesel generators. (Unit 1, Severity V, 8232)

b. A cable conduit penetration through a fire wall was unsealed. (Unit 2, Severity IV, 8233)

c. A penetration through a fire wall adjacent to the Unit 2 turbine-driven emergency feedwater pump was not sealed. (Unit 2, Severity IV, 8310)

The eight LERs listed below involve activities in the functional area of fire protection:

a. The following list of causally-linked LERs describe inoperable fire barriers:

Unit	LER No.	Cause of Inoperable Barrier
2	82-029/03L-0	Maintenance personnel pulled cables through a fire curtain.
1	82-018/03L-0	Ten fire barrier penetrations found improperly sealed during a walkdown. Cause was personnel error.
2	82-039/03L-0	Four fire barrier penetrations reported improperly sealed due to personnel error.
2	83-004/03L-0	Fire barrier penetration unsealed due to personnel error while performing modifications.
2	83-008/03L-0	Eight fire barrier penetrations found improperly sealed during a walkdown. Cause attributed to inadequate work controls.

2	83-021/03L-0	Fire barrier penetration not sealed due to administrative error.
2	83-026/03L-0	Two fire barrier penetrations not properly sealed. Cause unknown.

b. A fire watch was not properly posted adjacent to a degraded fire barrier. (Unit 2, 83-020/01T-0)

2. Conclusions

The licensee maintains a vigorous fire brigade training and drill program. The licensee has two fulltime fire and safety specialists on the plant staff.

However, the LER and enforcement history points to repetitive violations of the integrity of fire barriers throughout the plant. The large number of such violations are indicative of a programmatic breakdown in licensee's administrative controls. The repetitive nature of the LERs also indicates that corrective action is not timely or effective. The numerous personnel errors relative to violations of fire barrier integrity indicate that the licensee's training and qualification program for engineering and maintenance personnel is a contributing factor to their poor understanding of fire protection criteria.

The licensee is considered to be in performance category 3 in this area.

3. Board Recommendations

a. Recommended NRC Actions

The level of NRC inspection effort in this functional area should be increased, with particular emphasis on the licensee's control of combustible material and administrative control of fire barriers.

b. Recommended Licensee Actions

The licensee's performance in this category shows no apparent improvement since the period covered by the 1982 SALP Report when three violations and three LERs were identified relative to the failure to maintain fire barrier integrity and failure to control combustible material. Therefore, it is apparent that increased and vigorous management attention is required to restore the effectiveness of the fire protection program. Effective administrative controls governing the integrity of fire barriers must be implemented and rigorously enforced. Fire protection criteria and procedures should be an integral part of the training and qualification programs for plant engineering, operations, and maintenance personnel. The licensee should initiate increased audits and inspections of the physical fire barriers and their associated drawings and documentation until complete compliance is assured.

F. Emergency Preparedness

1. Analysis

An emergency appraisal follow-up was conducted during the evaluation period. There were six significant findings which had been identified in the previous SALP report issued August 17, 1982. These six items were closed during the emergency appraisal follow-up (50-313/82-23; 50-368/82-20) conducted during July 19-23, 1982. One item closed was item 4, Public Education and Information. Following the closing of this item there were discussions held with AP&L concerning the adequacy of the distribution of the information brochure to the transient populations and to other members of the public. AP&L responded on December 10, 1982, that they were expanding their coverage to cover a larger portion of the population. Further, it was stated that this program would be implemented within 90 days. The program was given to the state, which had been given the initial program, to complete. The public information program had not been completed as of the end of the reporting period.

Management involvement and control in assuring quality in the emergency preparedness area during the evaluation period appeared to be consistent with good management practices. Examples included management representation attendance at emergency preparedness exit interviews, issuance of clear directives for resolution of problems with the ANO station address system, and expansion of the computer word processing and tracking system into the emergency preparedness program.

During this reporting period, AP&L has been slow in responding to open items. AP&L requested and received several extensions to respond to the June 25, 1982, Emergency Plan Evaluation Report, final extension to May 1, 1983. Upon receipt of their response of April 29, 1983, it was noted that there were a number of deficiencies that were to be addressed in an upcoming revision to the Emergency Plan. Further, it was noted that there were no target dates for completion. On May 31, 1983, a letter was sent to AP&L from the regional office requesting a response to all items within 30 days.

During this reporting period, AP&L conducted their annual full scale exercise. It was noted during the exercise that the plant address system could not be heard or understood by the fire brigade members. This area had been previously noted and said to have been corrected by AP&L. It was also noted that there

were notification conflicts between the Duty Emergency Coordinator and the Control Room for notifying the state during the exercise. The inspectors noted that the TSC recovery manager did not direct the TSC effort toward assisting the control room operations.

Further, it was noted that personnel accountability took 1 hour, 37 minutes to complete in the 1983 exercise, accountability was identified as an open item for the 1982 exercise.

In response to the NRC findings from the 1982 ANO emergency exercise, AP&L did conduct a full exercise and simulation was held at a minimum. In addition, personnel responded to the exercise scenario and all players participated in the exercise until the exercise was declared over. Management demonstrated the ability to exchange roles in the Emergency Operations Facility (ECC); e.g., the Emergency Coordinator assisted in conducting media information sessions and turned over the EC role to his back-up. In response to the NRC findings from the 1982 ANO emergency exercise, AP&L demonstrated the capability to move the Technical Support Center (TSC) personnel from the primary TSC to the Alternate TSC in the EOF.

AP&L staffing of the emergency preparedness program during the reporting period was observed to be ample, both at ANO and in the Little Rock Corporate Office. Staffing of the emergency response organization for the emergency exercise indicated an adequate staffing plan for responding to emergencies at ANO. However, depth and backup positions for the top three management positions of the emergency response organization did not appear to be ample. Observations during the appraisal followup and exercise inspection demonstrated that key emergency staff positions were clearly identified, and authorities and responsibilities were well defined.

There were no reportable events in the emergency preparedness area received during this reporting period.

During the evaluation period, no violations or deviations were identified; however, inspection activities were limited to the emergency appraisal followup and inspection of the annual emergency exercise. Because of the limited compliance oriented observations, AP&L performance in this area was insufficient to categorize the enforcement history.

2. Conclusions

AP&L is considered to be in performance category 2 in this area. AP&L has the capability to protect the public health and safety in the event of an accident at Arkansas Nuclear One, but deficiencies identified in this area indicate that licensee attention to the area of emergency preparedness at Arkansas Nuclear One should be maintained at the present level.

3. Board Recommendations

a. Recommended NRC Actions

The NRC inspection effort in this functional area should remain at its present level.

b. Recommended Licensee Actions

Continued management level overview is needed to accomplish emergency preparedness program objectives. Continued management involvement is needed in assuring timely and comprehensive responses to NRC inspection findings. Additional management effort should be given to determining that effective personnel training has been accomplished.

G. Physical Security

1. Analysis

a. To achieve the general performance objectives, for this program area, the licensee must maintain an onsite physical protection system and security organization. These shall include, but not necessarily be limited to, the capabilities to meet the specific requirements related to the following elements:

Physical Security Organization
Physical Barriers
Access Requirements
Detection Aids
Communication Requirements
Testing and Maintenance
Response Capability

b. One violation was identified regarding security procedures. The violation involved failure to maintain positive control of a vital area door. (Unit 1, Severity Level IV, 8306)

The security management at ANO diligently meets the reporting requirements related to security. Each event is carefully examined by the security staff and other support elements for impact and resolution. The ANO security manager discusses issues with the NRC staff on a regular basis. Further, ANO staff have devised a reporting technique that sets a good example for others in meeting the practical and regulatory exercises necessary to effectively report events under 10 CFR 73.71(c).

c. Two major technical issues were present during the reportable period. One is the continuing matter of reconstituting the sensor monitoring capabilities of the physical security system. The other issues related to a suspected loss of safeguards information. The first issue is a continuing matter in which positive progress is being made. The second issue was very carefully and thoroughly researched to ensure that no real hazard was present and to evaluate the information control system to verify that it was effective.

d. Numerically, the number of guards in ratio to posts and tasks is excellent. The guard contractor's onsite manager position has turned over. The turnover was a very smooth transition. The addition of the investigator to the site security staff has been an effective assignment. Professional support from the AP&L corporate security staff is readily available to the ANO site.

e. ANO made an early implementation of the training and qualifications plan as set out by Appendix B of Part 73 of 10 CFR. The quality of the program is excellent.

2. Conclusions

The performance level associated with the physical security program has progressed during this assessment period compared to that of the previous period. While progress has been on a very positive course, one major technical issue remains to be concluded; that is the matter of the physical security system's efficiency.

The involvement of management has been very good. Strong contributions of thought and time resources have been made from the total corporate and site management programs. The licensing elements have systematically pursued the resolution of this major burden that has been borne by the security force due to faulty contractor work.

An effective and open dialogue exists between the security elements of NRC and ANO, while maintaining a proper regulatory stance. ANO staff has been quick to accept the concepts offered by NRC which the inspectors gain from their oversight role.

The licensee is considered to be in performance category 1 in this area.

3. Board Recommendations

a. Recommended NRC Actions

The level of NRC inspection effort concerning physical barriers, detection aids, and testing/maintenance could be reduced from its accelerated mode. Security plan implementation should be reviewed by NRC inspectors during the next emergency exercise at Arkansas Nuclear One.

b. Recommended Licensee Action

Maintain close vigilance of the progress being made toward the finalization of the reconstituting of the sensor monitoring capabilities of the physical security system. Consideration may be given on the part of management to forming an internal review mechanism to ensure that security plans and programs are integrated with other licensee efforts and that there is no unnecessary conflict with safe operations.

H. Refueling

1. Analysis

This area has been inspected on a continuing basis by the NRC resident inspectors. Both Units 1 and 2 were involved in refueling activities during this appraisal period. The two violations listed below involve activities in the functional area of refueling.

a. The licensee failed to station either a fuel handling area upender operator or a reactor building upender operator while transferring fuel to the auxiliary building. (Unit 2, Severity V, 8226)

b. Changes were made to the licensee's refueling shuffle procedure without documented prior approval. (Unit 1, Severity V, 8303)

The two LERs listed below involve activities in the functional area of refueling:

a. Incorrect shape annealing matrices were input into the core protection calculators during power ascension testing after refueling. The evaluation and corrective actions discussed in the licensee's letter of June 3, 1983, appear to be appropriate. This item will be reviewed during a future NRC inspection. (Unit 2, 82-042/01T-0)

b. The core operating limit supervisory system (COLSS) power operating limit alarm was received due to a procedural error during power range startup testing following refueling. (Unit 2, 82-043/03L-0)

2. Conclusions

The inspectors' reviews of refueling procedures and observations of refueling activities gave evidence of prior planning and effective control of activities by the licensee. The licensee's training and requalification efforts in preparation for refueling contributed to an adequate understanding by personnel involved in the activity and fair adherence to procedures, with only a modest number of personnel errors.

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

3. Board Recommendations

a. Recommended NRC Actions

The NRC inspection effort should remain consistent with the basic inspection program.

b. Recommended Licensee Actions

Licensee management should require a more formal and rigorous approach to procedural compliance during refueling and postrefueling testing operations.

I. Licensing Activities

1. Analysis

One inspection covering licensing activities was made by NRC Region IV and NRC headquarters personnel. This inspection was conducted as a result of a misleading statement made by the licensee relative to their response to IE Bulletin 80-06, titled "Engineered Safety Feature Reset Controls." The purpose of the inspection was to review and verify that other licensee actions taken, and commitments made, in response to NRC communications were carried out as indicated. In addition to this special inspection, the NRC resident inspectors periodically reviewed licensing activities in the course of their routine inspections. The resident inspectors identified one deviation involving the failure of the licensee's commitment tracking system when information concerning the environmental qualification of electrical equipment was not submitted to an NRC contractor as previously committed. (Unit 1, Deviation, 8219)

The NRC Office of Nuclear Reactor Regulation has performed an assessment of licensee performance in licensing activities. Refer to Attachment 1 for details of this assessment.

2. Conclusions

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

3. Board Recommendations

a. Recommended NRC Actions

The NRC inspection effort should remain consistent with the basic inspection program.

b. Recommended Licensee Actions

Continued efforts are needed to improve the licensee's commitment tracking system to ensure that responses to NRC requests are timely and comprehensive.

J. Training

1. Analysis

One inspection in this area was performed by region-based NRC inspectors, and the NRC resident inspectors reviewed the training program implementation periodically during this evaluation period. One violation was identified in the functional area of training. This violation involved the licensee's failure to adequately implement their procedural requirements for semiannual licensed operator reviews of emergency procedures and for the maintenance of the requalification status log. (Units 1 and 2, Severity V, 313/8228 and 368/8226)

One LER involved activities in the functional area of training. Electrical maintenance personnel had failed to use the licensee's jumper and lifted lead control procedure when making a temporary modification to a safety-grade electrical distribution system. The cause was determined to be personnel error brought on by inadequate training on the requirements for making such temporary modifications. (Unit 2, 83-013/03L-0)

2. Conclusions

The licensee has an effective licensed operator training program, as demonstrated by their high degree of success in obtaining reactor operator and senior reactor operator licenses during this evaluation period. Additionally, the licensee has made substantial progress towards obtaining their own plant-specific simulators for both units. The licensee's general employee and operator requalification training programs are well defined and dedicated resources and a means for feedback of experience have been provided. Weaknesses have been identified in the quality of operator requalification lectures, particularly with respect to a general lack of appropriate depth of technical detail. The licensee continues to exhibit difficulty in adequately implementing the requirement for semiannual reviews of abnormal and emergency operating procedures by licensed operators.

The licensee is considered to be in performance category 2 in the funcational area of training.

3. Board Recommendations

a. Recommended NRC Actions

The level of NRC inspection effort in the functional area of training should remain consistent with the basic inspection program.

b. Recommended Licensee Actions

Licensee management should continue its efforts to improve the quality of the training lectures. In addition, management should maintain its present commitments to make the plant-specific simulators operational at the earliest possible date. As noted in Section A, "Plant Operations," licensee management should consider providing operator licensing training to selected members of both plant and corporate level management.

K. Quality Assurance

1. Analysis

One inspection in this area was performed by region-based NRC inspectors. Although the implementation of the licensee's quality assurance (QA) program was not the subject of any other specific inspections, it is considered during many inspection activities. Included within the scope of the functional area of quality assurance is the licensee's utilization of the quality control (QC) organization. The three violations listed below involve activities in the functional area of quality assurance:

a. Records of material used for two design change packages (DCPs) were lost. These DCPs were subsequently closed with the majority of the material used not identified. (Unit 2, Severity V, 8302)

b. The following two violations discuss problems relative to the QC organization's failure to ensure that DCPs were complete before being processed to file:

(1) Four DCPs had data missing and signature blanks verifying work completion had not been signed. (Unit 1, Severity V, 8302)

(2) One DCP had postmodification testing verification signature blocks not signed. (Unit 2, Severity V, 8303)

One LER involved activities in the functional area of quality assurance. An unauthorized modification was made to the upper oil reservoir piping on two of the three Unit 1 service water pumps. Maintenance personnel had installed oil drains that were not seismically qualified. (Unit 1, 83-05/03L-0)

2. Conclusions

The licensee's QA audits are generally complete and thorough. Records of activities affecting quality are generally complete, well maintained, and available. The licensee's QC organization has been improved by the addition of an extra QC engineer and by the formal qualification of many of the QC inspectors.

Responses to QA audit findings occasionally are not timely or responsive. The QA and QC organizations do not have personnel knowledgeable in plant operations, thus hindering their ability to perform safety inspections of operations activities.

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

3. Board Recommendations

a. Recommended NRC Actions

The level of NRC inspection effort in the functional area of quality assurance should be consistent with the routine inspection program.

b. Recommended Licensee Actions

The licensee should consider expanding the scope of QA/QC inspection activities to include independent safety verifications in the area of plant operations. Such a program could assist in the reduction of the types of problems identified in the analysis sections of the plant operatons (Section A.1) and surveillance (Section D.1) functional areas. In addition, the licensee should more consistently use the QC organization to monitor maintainance activities that have a high degree of safety significance. The use of QC hold points could be useful in this regard.

L. Management Controls

1. Analysis

The degree and success of management controls exerted by the licensee over safety-related activities at Arkansas Nuclear One was not the subject of specific inspections during this evaluation period, but management involvement is considered during many inspection activities. Included within the scope of the functional area of management controls is management's utilization of the plant safety committee (PSC), and the safety review committee (SRC). The activities of the licensee's PSC and SRC have been the subject of periodic inspections by region-based NRC inspectors and by the NRC resident inspectors. The four violations and one deviation listed below involve activities in the functional area of management controls:

a. The PSC did not investigate the Technical Specification violation that occurred when a plant staff position was filled by an individual who did not meet the ANSI N18.1 qualification requirements. (Units 1 and 2, Severity V, 8233)

b. The licensee's offsite engineering group was not reviewing plant originated design changes. (Units 1 and 2, Severity V, 8304)

c. A form required by a licensee procedure to be used as part of the closeout of completed design changes and modifications was not provided by the procedure. (Units 1 and 2, Severity V, 8304)

d. A change was made to a test procedure contained in a design change package without PSC review or approval of the general manager. (Unit 1, Severity V, 8302)

e. One deviation was identified regarding NUREG 0737 - Clarification of TMI Action Plan Requirements, Item II.B.2, "Design Review of Plant Shielding and Environmental Qualification of Equipment for Spaces/Systems." This deviation involved the failure of the licensee to make changes in certain procedures as stated in their correspondence to NRR. (Unit 1, Deviation, 8214)

The two LERs listed below involve activities in the functional area of management controls:

a. An upper seal pressure sensing line on a reactor coolant pump failed and began to leak inside containment. This is a repetitive problem caused by a faulty design that allows excessive vibration of the sensing line. This problem had been identified to licensee management on numerous occasions in the past by both licensee personnel and by the NRC resident inspector. (Unit 2, 83-023/03L-0)

b. Certain Unit 2 reactor coolant system resistance temperature detectors' (RTDs) response times had degraded, but the corresponding plant protection system channels had not been properly compensated. Additionally, due to a lack of adequate administrative controls, the allowable time limit to take corrective action, defined by the appropriate Technical Specification, had been exceeded on two occasions when degraded RTDs were identified. (Unit 2, 83-025/0IT-0)

2. Conclusions

Licensee management attention and involvement in safety-related activities at Arkansas Nuclear One are quite evident, and licensee management places high priority on the safe operation of the nuclear units. Corporate management is involved in site activities, and corporate management has been responsive in ensuring that plant staffing is adequate, with key positions being identified and vacancies filled in a reasonable time. The violations listed in this functional area are primarily the result of management control weaknesses in the 1980-1981 time frame. The majority of the factors that contributed to these violations appear to have been identified and corrected by licensee management.

Other areas indicating strong licensee management controls include:

a. The lisensee's resolution of the electrical connector problems in the Unit 2 plant protection system (PPS) cabinets was notable. This issue involved the potential for spurious actuations of the reactor protection system and engineered safeguards system if certain electrical connectors in the PPS cabinets were disconnected. The licensee demonstrated a clear understanding of the issue, and provided a technically sound and conservative approach to the timely resolution of the problem during January 1983.

b. The licensee demonstrated a technically sound and conservative approach to the resolution of a significant safety problem involving the failure of a Unit 1 reactor trip breaker (RTB) to operate on demand in March, 1983. This event occurred after the issuance of IE Bulletin 83-04 which reported similar types of problems at other nuclear plants. The licensee's quick response and recommended corrective measures demonstrated that they had a clear understanding of the issue and were committed to determining the most effective resolution.

Areas which require increased management attention include:

a. Maintenance of fire barrier integrity

b. Increased management involvement in the technical details of plant operation. Routine tours of safety-related areas by plant management at the superintendent and manager level could be beneficial.

c. Identification and resolution of generic or causally-linked failures of plant equipment.

d. Commitment tracking.

e. Upgrading upper plant management's level of plant-specific technical knowledge concerning both Arkansas Nuclear One units.

f. Lack of completeness and attention to detail in the LERs.

g. Inadequate technical detail and poor human factors features found in many maintenance procedures.

The licensee is considered to be in performance category 2 in the functional area of management controls.

3. Board Recommendations

a. Recommended NRC Actions

The level of NRC inspections should remain consistent with the basic inspection program.

b. Recommended Licensee Actions

Licensee management is urged to increase their involvement in the areas listed above.

V. Supporting Data and Summaries

A. Violations

1. Unit 1 - See Attachment 2

2. Unit 2 - See Attachment 3

B. Licensee Report Data

1. Licensee Event Reports (LERs)

The Regional SALP Board reviewed the LERs for the period of July 1, 1982, through June 30, 1983. This review included LERs 50-313/82-14 through 82-32 and 83-01 through 83-15 for Unit 1, and 50-368/82-24 through 82-52 and 83-01 through 83-27 for Unit 2.

The classification of cause of event and number of LERs during this report period (7/1/82 through 6/30/83) are listed as follows:

Cause	Unit 1	Unit 2
Component Failure	21	35
Defective Procedure	1	1
Design/Fabrication Error	2	7
External Cause	0	0
Personnel Error	9	11
Other	0	0
TOTAL	33	54

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.

The NRC Office for Analysis and Evaluation of Operational Data performed reviews of licensee LERs, focusing on the accuracy and completeness of the reports. Refer to Attachments 4 and 5 for details of these reviews.

2. Part 21 Reports

None

C. Licensee Activities

1. Unit 1

August 1982 - One week outage to replace failed seal on reactor coolant pump (RCP) 'C'.

October 26, 1982 - secured RCP 'B' due to seal leak. Continued operating with three reactor coolant pumps.

November 9, 1982 - Commenced refueling outage (1-R5). During the outage the following significant activities took place;

. An eddy current examination of all generator tubes was performed. Based on examination results, 83 tubes were plugged in 'A' steam generator and 45 in 'B' steam generator.

- An inservice inspection of the reactor vessel thermal shield bolts determined that 48 of 96 were broken and three others had cracks. All 96 were replaced.

April 10, 1983 - Completed low power physics testing after outage.

April 12, 1983 - Plant shutdown to make repairs on main turbine bearing. Concurrent with turbine repairs, the upper reactor core barrel support bolts were inspected because of problems experienced at other Babcock and Wilcox plants.

May 19, 1983 - Unit remained shutdown to replace failed seals on RCP 'D' and RCP 'B'.

June 16, 1983 - Commenced a two-week outage to repair damaged main turbine generator exciter.

2. Unit 2

August 20, 1982 - Commenced refueling outage (2-R2). During the outage, the following significant activities took place:

- Large diameter piping in the service water system was chemically cleaned to remove a buildup of corrosion products.

- Modifications were made to certain fuel assemblies to correct for insufficient clearance between the top of the fuel rods and the bottom of the upper flow plate.

- All fuel assemblies that comprised the cycle 2 core loading of ANO-2 were tested for leaking fuel rods by a method referred to as wet sipping. Based on test results, it was concluded that five fuel assemblies in the ANO-2, cycle-2 core contained leaking fuel rods. These fuel assemblies were then reconstituted.

November 10, 1983 - Commenced physics testing following refueling outage.

January, 1983 - Three-week outage to repair condenser tube leaks. Certain plant protection system cabinet electrical connectors had their wiring modified to prevent spurious actuations of the reactor protection system and the engineered safeguards system.

D. Major Inspection Activities

1. One major, non-routine inspection activity occurred during the evaluation period. During the period of September 7-17, 1982, a team of seven NRC inspectors, including both region-based and headquarters personnel, conducted an inspection to review and verify that licensee actions taken, and commitments made, in response to NRC communications were carried out as indicated. To accomplish this, the inspectors reviewed the licensee's responses to IE Bulletins, NRC Inspection Reports, NUREG-0737 items, and NRR Generic Letters. All such responses, since April 1979, were covered by this inspection. This inspection effort involved a total of 358 man-hours.

2. One Confirmatory Action Letter (CAL) was issued to the licensee by NRC Region IV during the evaluation period. The CAL was issued on March 25, 1983, in response to a March 23, 1983, failure of a Unit 1 reactor trip breaker to operate on demand from the control room. The CAL required the licensee to complete various actions to assure reactor protection system reliability prior to Unit 1 returning to power operations. Due to the generic nature of this issue (refer to IE Bulletins 83-01 and 83-04), responsibility for the resolution of this event was subsequently transferred from NRC Region IV to the Office of Nuclear Reactor Regulation (NRR). NRR then issued a Safety Evaluation Report (SER) on April 5, 1983, which superseded the March 25, 1983, CAL.

E. Escalated Enforcement Activities

1. Civil Penalties

One civil penalty was issued to the licensee during the evaluation period. A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of $20,000 was issued by letter, dated March 8, 1983. This civil penalty was levied as a result of the operation of Unit 1 for one complete cycle with pressure instrument channel 'B' of the reactor building pressure input to engineered safeguards actuation system analog channel 'B' inoperable due to a plug in the input sensing port of the pressure transmitter. This item had been originally discovered by the licensee and reported in an LER. The event was determined to constitute a Severity Level III violation.

2. Orders

None

F. Investigations and Allegations

None

G. Enforcement Conferences

An Enforcement Conference was held with licensee management in the NRC Region IV office on February 18, 1983, to discuss two items:

1. The results of the licensee's investigation into the facts surrounding the plugged pressure transmitters in Unit 1 (see paragraph E above). The licensee's corrective actions were also discussed.

2. The safety-significance of the licensee's incorrect loading of the shape annealing matrices into the Unit 2 core protection calculators, and the licensee's subsequent corrective actions. This item was initially reported in Unit 2 LER 82-042/0IT-0.

Attachment 1

Facility Name: Arkansas Nuclear One, Units 1 and 2 (ANO-1&2)
Licensee: Arkansas Power & Light Company (AP&L)
NRR Project Managers: Guy S. Vissing, (ANO-1)
Robert Lee (ANO-2)

I. Introduction

This report presents the results of an evaluation of the licensee, AP&L, in the functional area of licensing activities for ANO-1 and ANO-2. It is intended to provide NRR's input to the SALP review process as described in NRC Manual Chapter 0516. The review covers the period July 1, 1982 to June 30, 1983.

The basis approach used for this evaluation was to first select a number of licensing issues which involved a significant amount of staff manpower. Comments were then solicited from the staff. In most cases the staff applied the evaluation criteria for the performance attributes based on their experience with the licensee or his products. Finally, this information was assembled in a matrix which allowed an overall evaluation of the licensee's performance. This evaluation is based on staff input from nine branches in four NRR divisions. See Attachment 1.

II. Summary of Results

NRC Manual Chapter 0516 specifies that each functional area evaluated will be assigned a performance category based on a composite of a number of attributes. The single final rating is to be tempered with judgment as to the significance of the individual items.

Based on this approach, the performance of AP&L in the functional area - Licensing Activities - is rated Category 2.

III. Criteria

Evaluation criteria, as given in NRC Manual Chapter Appendix 0516 Table 1, were used for this evaluation.

IV. Performance Analysis

The licensee's performance evaluation is based on a consideration of seven attributes as given in the NRC Manual Chapter. For most of the licensing actions considered in this evaluation, only three or four of the attributes were of significance. Therefore, the composite rating is heavily based on the following attributes:

-Management involvement
-Approach to resolution of technical issues
-Responsiveness

Within the exception of Enforcement History, for which there was not basis within NRR for evaluation, the remaining attributes of

-Reportable events
-Staffing
-Training

were judged to apply only to a few licensing activities.

The evaluation was based on our evaluaton of the following licensing activities:

for ANO-1&2

1. Technical Specification for Surveillance of Snubbers
2. Emergency Response Capability
3. July 1, 1982 Appendix R Exemption Request
4. Technical Specification on Reporting Safety and Relief Valve Cnallenges
5. Water Quality Technical Specifications
6. Appendix R Schedular Exemptions Requests of March 28 and March 29, 1983
7. Technical Specification for Purge Valves
8. Fire Protection Alternate Shutdowwn Capability Review.
9. Technical Specification for Surveillance Limits for Operability
10. Operator Training and Licensing Activities
11. Response to NUREG-0737

For ANO-1

1. Environmental Qualification of Safety Related electrical Equipment
2. Steamline Break I&C setpoints
3. OTSG Inspection
4. Remedial Actions Concerning OTSG Inspection
5. Cycle 6 Reload Review
6. Technical Specification for Tendon Surveillance
7. Reactor Trip Breaker Issue
8. Fire Protection Exemption Request for 72 Hour Shutdown Requirements
9. Exemption Request for High Point Vents
10. Technical Specification for RCP Motor Fly Wheels
11. Steam Generator Secondary Water Chemistry
12. Upper Core Barrel Bolt Issue

For ANO-2

1. Core Protection Calculator Software Error
2. Environmental Qualification of Safety Related Electrical Equipment
3. Cycle 2 Inspection Results
4. Fire Protection License Condition Requirement

For the Spent Fuel Pool Expansion Issue

1. Auxiliary System Branch
2. Core Performance Branch
3. Chemical Engineering Branch
4. Accident Evaluation Branch
5. Radiological Assessment Branch
6. Meteorological & Effluent Treatment Branch
7. Structural Engineering Branch
8. Environmental Engineering Branch

A. Management Involvement in Assuring Quality

Overall rating for this attribute is Category 2. There is evidence of planning and assignment of priorities and decision making seems to be at a level that ensures management review. In general, the rating is consistent when examined at the licensing activity levels listed above. Typical areas where management involvement was evident are in the Training, Examination and Licensing of Operators, in the licensing action related to the Water Quality Technical Specification issue and is the Spent Fuel Pool Expansion issue after the licensee realized that the NRC schedule would impact the licensees capability to implement the expansions. Areas where management involvement appears to have been weak is in the initial activity related to the Spent Fuel Pool Expansion issue, in the Technical Specification for Snubbers, and in the Appendix R Schedular Exemptions Requests of March 28 and March 29, 1983, and in the Technical Specification for Surveillance Limits for Operability.

The Appendix R Schedular Exemption Request of March 28 and March 29, 1983, has been a particular concern. The licensee submittal of July 1, 1982, provide the licensee's reassessment of the ANO-1 and 2 compliance to 10 CFR 50.48 and 10 CFR 50 Appendix R. Certain areas were committed to have fire barriers installed by April 1, 1983. In other areas the licensee either indicated or committed to provide fire protection features in the form of suppression/ detection systems and separation of redundant trains by fire barrier.

After discovering that the schedule for installing some particular barriers could not be met, the licensee requested a schedular exemption for the barriers. Late in the year the licensee discovered that the rule may have been misinterpreted and therefore, particular areas may not have had sufficient supression/detection systems and separation by barriers of certain redundant trains may not have been adequate. As a result the licensee submitted a schedular exemption request for all suppression/detection systems and all barriers and all penetrations thereto.

The exemption request for schedular delay of installation of selected fire barriers was not timely and left no time for the staff to react prior to the deadline passing. In addition it offered no compensatory action in lieu of the delay of the installation of the fire barriers.

The schedular exemption request related to all suppression/detection systems and all barriers was not specific, provided no sound technical justifications, and provided no compensatory actions in lieu of the delay in resolving the issue.

The request was not a valid request upon which the staff could act. This issue is pending until the licensee can submit more specific requests.

Recognizing that the issues concerning Appendix R are difficult and complex for the licensee, the staff has given considerable attention to the ANO-1 and 2 issue and will continue to do so until the issues are resolved.

B. Approach to Resolution of Technical Issues from a Safety Standpoint

This overall rating for this attribute is Category 2. Most issues were in Category 2 with a few in Categories 1 and 3. Areas of greatest strength were with the Operator Training, Examination and Licensing Activities, in the Water Quality Technical Specification issue, in the Environmenal Qualification of Safety Related Electrical Equipment for ANO-2 and in the resolution of the license condition related to Fire Protection for ANO-2. Areas of greatest weakness were in the licensing activities related to the Appendix R Schedular Exemption Request for All Suppression/Detection Systems and All Barriers, in the Technical Specification for Snubbers issue, and in the Reactor Trip Breaker Failure issue for ANO-1. The snubber issue resolution has been delayed for over 2 years generally because of poor communication regarding staff and licensee problems with the ANSI/ASME Standard OM4 and Standard Technical Specifications respectively.

C. Responsiveness

The overall rating for this attribute is Category 2. For individual licensing actions examined for this assessment category ratings were mostly 2 with many judged to be 1 and a few judged to be 3. Areas of greatest strength were in the Technical Specification for Inspection of RCP Motor Fly Wheels Issue Cycle 6 Reload issue, Emergency Response Capability issue, Operator Training and Licensing Activities, Water Quality Technical Specifications issue, Environmental Qualification of Safety Related Electrical Equipment for ANO-2, Cycle 2 Fuel Inspection results for ANO-2, and the Licensing Conditions Related to Fire Protection for ANO-2. The licensee per formance on a few actions were judged to fall in Category 3 notably in the Technical Specificaiton for Snubbers issue, the Appendix R Schedular Exemption Request of March 28 and March 29, 1983, and the Technical Specification for Surveillance Limits for Operability. The staff does not have a valid Appendix R Schedular Exemption request concerning all barriers and all suppression/detection systems on which we can act.

The performance on licensing activities related to Environmental Qualification of Safety Related Electrial Equipment for ANO-2 was particularly good. In one instance the licensee responded within three working days with technically sound and thorough responses.

Although improvement has been noted in the telephone access to the licensee's licensing personnel, the intended improvement has not been implemented 100%.

The licensee improvements in responsiveness is apparent. The licensees' tracking system has considerably assisted in improving the licensee's responsiveness.

V. Conclusion

Based on the evaluation of seven attributes of AP&L's performance for 28 significant activities in the functional area of licensing, an overall performance rating of Category 2 is determined. Specifically, management attention and involvement with matters of nuclear safety is evident, licensee resources are adequate, and satisfactory performance with respect to operational safety is being achieved. Significant issues have been completed during this period, particularly the Spent Fuel Pool Expansion issue, the Reactor Coolant Pump Motor Fly Wheel Examination Issue, and the Emergency Response Capability Submittal. The licensee's responsiveness has improved.

Confusion resulted in the licensees action regarding the Appendix R Exemption Requests of July 1, 1982, and the subsequent request of November 11, 1982. However, these exemption requests were resolved after the first of the year. The resolution of the licensee's Appendix R Schedular exemption request of March 28 and March 29, 1983 remains open.

Recommendations

The licensee should continue the action tracking system with the possible inclusion of verbal requests in the system. The licensee should provide the staff a more valid exemption request concerning Appendix R schedular exemption on all barriers and suppression/detection systems. The licensee should improve the capability of the NRC Project Managers to have telephone access to the licensee's staff.

AP&L (ANO-1&2) EVALUATION MATRIX

Licensing Action (Unit)	Management Involvement	Approach to Resolution	Responsiveness	Enforcement History	Reportable Events	Staffing	Train
. Tech. Specifications for Surveillance for Snubbers (1&2)	3	3	3	No Basis	N/A	N/A	N/A
. Emergency Response Capability (1&2)	2	2	1	N/A	N/A	N/A	N/A
. July 1,1982, Appendix R Exemption Requests (1&2)	2	2	2	N/A	N/A	N/A	N/A
. Tech. Specs. on Reporting Safety & Relief Valve Challenges (1&2)	2	2	2	N/A	N/A	N/A	N/A
. Water Quality Tech. Specs.	1	1	1	N/A	N/A	N/A	N/A
. Appendix R Schedular Exemption Requests of March 28 & 29, 1983	3	3	3	N/A	N/A	N/A	N/A
. Tech. Spec. for Purge Valves (1&2)	2	2	2	N/A	N/A	N/A	N/A
. Fire Protection Alternate Shutdown Capability Review (1&2)	2	2	2	N/A	N/A	N/A	N/A
. Tech. Specs. for Surveillance Limits for Operability. (1&2)	3	2	3	N/A	N/A	N/A	N/A
0. Operator Training and Licensing Activities (1 & 2)	1	1	1	N/A	N/A	N/A	N/A
1. Responses to NUREG-0737 (1 & 2)	2	2	2	N/A	N/A	N/A	N/A
2.							

AP&L (ANO-1&2) EVALUATION MATRIX

Spent Fuel Pool Expansions

Licensing Action	Management Involvement	Approach to Resolution	Responsiveness	Enforcement History	Reportable Events	Staffing	Train
Auxiliary Systems Branch	2	2	2	N/A	N/A	N/A	N/A
Core Performance Branch	2	2	2	N/A	N/A	N/A	N/A
Chemical Engineering Branch	1	1	1	N/A	N/A	N/A	N/A
Accident Evaluation Branch	2	2	2	N/A	N/A	N/A	N/A
Radiological Assessment Branch	1	1	1	N/A	N/A	N/A	N/A
Meteorology & Eff. Treatment Branch	2	2	2	N/A	N/A	N/A	N/A
Structural Engineering Branch	2	2	2	N/A	N/A	N/A	N/A
Environmental Engineering Branch	2	2	2	N/A	N/A	N/A	N/A

AP&L (ANO-1) EVALUATION MATRIX

Licensing Action Unit 1	Management Involvement	Approach to Resolution	Responsiveness	Enforcement History	Reportable Events	Staffing	Training
. E. Q. of Safety Related Elect. Equip (1)	2	2	2	N/A	N/A	N/A	N/A.
. Steamline Break I&C Set Points (1)	2	2	2	N/A	N/A	N/A	N/A
. OTSG Inspection (1)	2	2		N/A	N/A	N/A	N/A
. Cycle 6 Reload Review (1)	2	2	1	N/A	N/A	N/A	N/A
. Remedial Actions Concerning OTSG Inspections (1)	2	2	2	N/A	N/A	N/A	N/A
. Tech. Specs. for Tendon Surveillance (1)	2	2	2	N/A	N/A	N/A	N/A
. Reactor Trip Breaker Failure Issue (1)	2	2	2	No Basis	No Basis	No Basis	No Basis
. Fire Protection Exemption Request for 72 Hr. Shutdown Requirement (1)	2	2	2	N/A	N/A	N/A	N/A
. Exemption Request for High Pt. Vents (1)	2	2	2	N/A	N/A	N/A	N/A
0. Tech. Specs. for Inspection of RCP Motor Fly Wheels (1)	2	2	1	N/A	N/A	N/A	N/A
1. Steam Generator Secondary Water Chemistry (1)	2	2	2	N/A	N/A	N/A	N/A
2. Upper Core Barrel Bolt Issue	2	2	2	No Basis	No Basis	N/A	N/A

AP&L (ANO- 2) EVALUATION MATRIX

Licensing Action Unit 2	Management Involvement	Approach to Resolution	Responsiveness	Enforcement History	Reportable Events	Staffing	Trai
CPC Software Error	2	2	2	No Basis	No Basis	N/A	N/A
Environmental Qualification of Safety Related Electrical Equipment	1	1	1	N/A	N/A	N/A	N/A
Cycle 2 Fuel Inspection Results	2	2	1	No Basis	No Basis	N/A	N/A
Fire Protection - License Condition Resolution	2	1	1	N/A	N/A	N/A	N/A

ATTACHMENT 2

V. Supporting Data and Summaries

A. Violations - Unit 1
(NRC Inspection Reports 82-18 through 82-40 and 83-01 through 83-14)

Functional Areas	Severity Levels					Deviation
	I	II	III	IV	V	
Operating Reactors						
(1) Plant operations						
(2) Radiological Controls						
(a) radiation protection					2 (1)	1
(b) radioactive waste systems and effluent control/ monitoring						
(c) transportation/ solid Radwaste				1		
(d) confirmatory measurement						
(e) environmental monitoring						
(3) Maintenance				1		
(4) Surveillance - includes inservice and preoperational testing			1		1	
(5) Fire protection					1	
(6) Emergency Preparedness						
(7) Security and Safeguards				1		
(8) Refueling - includes initial fuel loading					1	
(9) Licensing activities						1
(10) Training					(1)	
(11) Management controls					2 (3)	
SUBTOTALS			1	3	7+(5)	2
TOTAL					13+(5)	

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

ATTACHMENT 3

V. Supporting Data and Summaries

A. Violations - Unit 2
(NRC Inspection Reports 82-15 through 82-39 and 83-01 through 83-14)

Functional Areas	Severity Levels					Deviation
	I	II	III	IV	V	
Operating Reactors						
(1) Plant operations					2	
(2) Radiological Controls						
(a) radiation protection					(1)	
(b) radioactive waste systems and effluent control/ monitoring						
(c) transportation/ solid Radwaste						
(d) confirmatory measurement						
(e) environmental monitoring						
(3) Maintenance						
(4) Surveillance - includes inservice and preoperational testing						
(5) Fire protection				1		
(6) Emergency Preparedness						
(7) Security and Safeguards						
(8) Refueling - includes initial fuel loading					1	
(9) Licensing activities						
(10) Training					(1)	
(11) Management controls					2 + (3)	
SUBTOTALS				1	5+(5)	
TOTAL	6+(5)					

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