



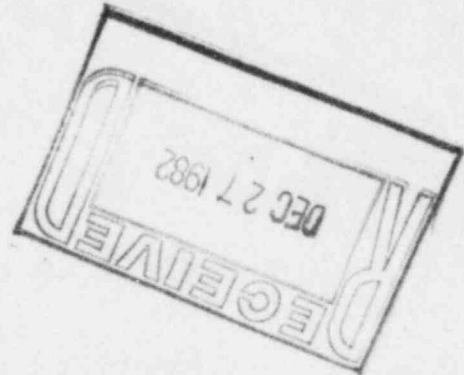
ARKANSAS POWER & LIGHT COMPANY

POST OFFICE BOX 551 LITTLE ROCK, ARKANSAS 72203 (501) 371-4000

December 20, 1982

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Mr. John T. Collins
Regional Administrator
U. S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, TX 76011



SUBJECT: Arkansas Nuclear One - Units 1 & 2
Docket Nos. 50-313 and 50-368
License Nos. DPR-51 and NPF-6
Systematic Assessment of Licensee
Performance (SALP) Board Report

Gentlemen:

Your letter dated November 19, 1982, (ØCNA1182Ø7) transmitted to us the Systematic Assessment of Licensee Performance (SALP) report for Arkansas Nuclear One for the period July 1, 1981, through June 30, 1982. On November 30, 1982, we met with you and your staff to discuss this report. In accordance with the directions of your letter, this constitutes Arkansas Power & Light Company's (AP&L) formal response to that SALP report.

In AP&L's July 14, 1982, response to the previous SALP report we stated that we endorsed the SALP concept. We also stated that we felt very strongly that an objective performance evaluation is of substantial benefit to both the licensee and the NRC and is effective in promoting a positive growth in safety performance. Furthermore, we said that we felt that such an evaluation enhances a licensee's ability, as well as the NRC's, to more effectively utilize resources and focus on the areas of most safety significance.

AP&L still endorses the SALP concept and it is our intent to be responsive to the SALP conclusions and recommendations. AP&L has a continuing goal to operate its nuclear units in the safest means humanly possible and all of our programs are aimed in that direction. As well, we desire to be one of the best and most responsive licensees in our working relationships with the NRC. Objective and substantiated feedback from the NRC in the form of SALP is an essential ingredient in our endeavors to meet these goals.

We must, however, acknowledge our disappointment with this SALP report. We have significant problems with the apparent methodology that was used as well as the format. AP&L does not believe that this report is not entirely

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December 20, 1982

objective or fair but rather biased by opinions. Many of the ratings are not substantiated by the facts included in the report, particularly when one compares this SALP to the previous one. Indeed, many of the facts and conclusions in the report would indicate a high rating when a comparison is made to the NRC SALP guidelines.

AP&L has a very strong perception that this is not the original SALP report which was developed by the Board in the summer of 1982 and was scheduled to be reviewed with AP&L on September 14, 1982. We feel very strongly that certain areas of the report have been unfairly and arbitrarily downgraded. In some areas we can see no basis for the downgrade and in one particular area it is obvious that a downgrade was made on the basis of an event outside the evaluation period. We are further disturbed by statements made in our review meeting which indicated you have downgraded AP&L in Emergency Preparedness on the basis of the EWS Tone Alert Radio issue, an issue which has not caused AP&L to be found in violation of any regulation or in deviation from a commitment.

AP&L also firmly believes that if the SALP program is to be totally effective it must in all cases recognize the programs the licensee has underway and the progress achieved. Yet, in a number of areas in this report no mention is made of docketed AP&L responses, which include descriptions of new programs and status reports of on-going programs.

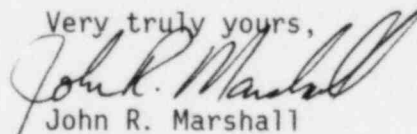
Although we are dissatisfied with this report, including its methodology and format, we nevertheless desire to take all the steps necessary to achieve our goals and prove to you that our nuclear programs is deserving of a much higher rating. We have put a lot of effort into our programs in the last few years and we are committed to work with you in meeting our mutual goals. As stated previously, we intend to fully address all of your conclusions and recommendations.

We had hoped to have time in our review meeting to present to you reports on a number of programs, which we have underway and which we think are critical in meeting our goals. Since we did not have the time, we would like to visit your offices and make these presentations in the near future. We believe you will find the information to be very enlightening and helpful in our future communications.

Attached are our detailed comments in an "item/response" format. These comments include discussion of the programs in place and their progress during the reporting period as well as some update on current activities.

For your information, attached is an attendance list for our meeting with you on November 30, 1982.

Very truly yours,


John R. Marshall
Manager, Licensing

JRM:rd

Attachment

SALP MEETING

November 30, 1982

John R. Marshall	Manager, Licensing, AP&L
Don Rueter	Director, Tech. & Env. Svcs., AP&L
William Cavanaugh III	Senior Vice Pres., Energy Supply, AP&L
John M. Griffin	Vice President, Nuclear Operations, AP&L
James M. Levine	General Manager, ANO, AP&L
L. J. Callan	NRC Senior Resident Insp., NRC
William D. Johnson	Chief, Rx Projects Section C, NRC
Charles A. Hackney	Emergency Preparedness Analyst, NRC
W. C. Seidle	Branch Chief, NRC
James K. Asselstine	Commissioner, NRC
John T. Collins	R. A. Region IV, NRC
Jim Gagliardo	Division Director, Region IV, NRC
Robert A. Clark	Branch Chief ORB #3, ONRR, NRC
Guy S. Vissing	NRC/NRR/ORB #4, PM-ANO-1
Oliver D. T. Lynch, Jr.	NRC/RI/ANO
Larry W. Humphrey	Plant Administrative Manager, ANO, AP&L
Jimmy D. Vandergrift	Training Superintendent, ANO, AP&L
Dale E. James	Licensing Engineer/Cont. Plan Coord., AP&L
Duke Dow	Manager, Nuclear Services, AP&L
Early C. Ewing	Manager, Engineering & Tech. Support, ANO, AP&L
M. L. Pendergrass	Director, Generation Engineering, AP&L
Carroll Dunn	Manager, Corporate Security, AP&L
Donald G. Horton	Manager, Quality Assurance, AP&L
Dan Howard	Licensing Supervisor, ANO-1, AP&L
Bob Morehead	Director of Admin. Services, AP&L
Tom Kilgore	Director, Generation Technology, AP&L
William T. Craddock	Manager, Availability Engineering, AP&L
Lawrence J. Dugger	Manager, Special Projects, ANO, AP&L
David D. Snellings, Jr.	Corp. HP, AP&L
J. Ted Enos	Licensing Supervisor, ANO-2, AP&L
Larry V. Parscale	Licensing Engineer, ANO-2, AP&L
Jim Cummins	NRC/RI/ANO

DECEMBER 20, 1982

ARKANSAS POWER & LIGHT COMPANY

ITEM BY ITEM RESPONSE TO:

NRC SALP BOARD REPORT

DECEMBER 20, 1982

IV. PERFORMANCE ANALYSISA. Plant Operations1. Analysis

This area has been inspected on a continuing basis by the resident inspectors. The five violations listed below involved plant operations:

- a. The requirements of the emergency diesel generator operating procedure were violated. (Unit 1, Severity V, 8135)
- b. Two locked manual valves in the discharge crossconnect line between the B and C makeup pumps were misaligned. (Unit 1, Severity V, 8204)
- c. The requirements of the procedure for controlling jumpers and bypasses were violated. (Unit 1, Severity V, 8213)
- d. The control room ventilation intake duct monitor was not operable as required by Technical Specifications. (Unit 2, Severity IV, 8124)
- e. A manual service water pump discharge valve was not locked in position as required by procedure. (Unit 2, Severity V, 8129)

The three licensee event reports (LER's) listed below could be attributed to plant operations:

- a. The pilot cell voltage on a station battery indicated less than the Technical Specification required value for 2 days before corrective action was taken. (Unit 2, 82-013/01T-0)
- b. The electrolyte level in station battery cells was higher than the allowable value. (Unit 2, 82-016/03L-0)
- c. Both containment atmosphere gaseous and particulate radioactive monitoring systems were out of service at the same time. (Unit 2, 82-022/03L-0)

2. Conclusions

The licensee is considered to be in performance Category 3 in this area. With respect to operational safety, satisfactory performance is being achieved, but weaknesses are evident. The number of violations involving failure to

follow procedures is excessive. Operator efficiency is reduced by an excessive number of nuisance annunciator alarms and the existence of drawings and procedures which have not been updated to reflect design changes.

The SALP Board had concerns relative to the licensee's proposed course of action to repair a leak on the Unit 2 'B' steam generator blowdown line on April 15, 1982. The licensee proposed to continue operation while effecting temporary repairs. NRC Region IV favored a more conservative approach involving a plant shutdown, nondestructive testing of suspect blowdown piping, and completion of permanent repairs. After discussions with the NRC Region IV Regional Administrator, the licensee shut down Unit 2 for the necessary inspections and repairs.

The licensee has established a five shift rotation in the operations department. This has enabled the establishment of a dedicated training shift. In order to reduce the necessity of overtime work by licensed operators to accommodate absences due to sickness and vacation, the licensee intends to increase staffing to permit a six shift rotation. The SALP Board concurs with this objective.

3. Board Recommendations

The licensee should emphasize the individual operator's responsibilities in correct performance of duties. The licensee should continue implementation of the upgraded license training and requalification training programs.

Additional knowledgeable personnel are needed who can respond to plant-specific technical licensing issues, and better communications are needed between the licensee's corporate office and the plant site personnel when responding to licensing issues. Similarly, better safety committee reviews are needed to assure the accuracy and completeness of plant operations information provided in correspondence to the NRC. Efforts to increase operator efficiency by reducing the number of nuisance alarms in the control rooms should continue. Upgrading of drawings necessary for operations should continue with emphasis on providing operators with accurate, legible drawings prior to declaring a system operable following a design change.

AP&L RESPONSE AND COMMENT

Under the area of Performance Analysis performed by the SALP Board, findings indicated weaknesses in the following areas within the Plant Operations Group:

- ♦ failure to properly follow procedures;
- ♦ selecting an improper course of action regarding the S/G blowdown line leak of April 15, 1982;
- ♦ excessive number of nuisance alarms reducing operator efficiency;
- ♦ failure to update drawings & procedures to reflect design changes.

Failure to Follow Procedures

AP&L recognizes the importance of emphasizing the responsibilities of each individual in the correct performance of duties. As such, special management attention has been placed on assuring staff personnel are cognizant of their responsibilities relative to attention to detail and procedural compliance. Presentations have been provided to ANO departments on this subject as a normal part of general employee retraining. This increased management attention will continue.

Steam Generator Blowdown Issue

AP&L appreciates the concerns relative to the steam generator blowdown line leak of April 15, 1982. However, we feel certain clarifications should be made regarding our actions during and following that event. On April 15, 1982, ANO-2 containment sump level increases indicated an undefined source of leakage in containment, other than RCS leakage. An entry was made into containment, and a secondary system leak was noted downstream of the first blowdown isolation valve and was diagnosed as erosion-induced degradation.

Operations personnel noted that with such thru wall piping degradation, containment integrity might be jeopardized since the steam generator blowdown lines are not designed to be isolated automatically following LOCA events. A special Plant Safety Committee (PSC) meeting was called and the PSC concurred that containment integrity was lost. The steam generator blowdown line was isolated, restoring containment integrity as defined by Technical Specification 4.6.1.1.(a). It should be noted that no "non-conservative" situation existed with this leak isolated.

Because of rapidly degrading steam generator secondary chemistry induced by lack of blowdown, the advice of the NRC resident was sought on the subject of providing an operator stationed at the outer blowdown isolation valve, in lieu of automatic isolation, and allowing periodic blowdown with such a dedicated operator provided to manually reclose the outer isolation valve if demanded. Had the blowdown isolation not affected S/G secondary chemistry, no contact would have been made with the NRC relative to use of a dedicated operator, and repairs would have proceeded within the isolated portion of the line without shutdown. However, we believed a Technical Specification change would be required in order for us to operate with the valve periodically open.

No further management dialogue occurred between AP&L management and the NRC Resident Inspector until a call was received from the Region IV Regional Administrator by AP&L's Senior Vice President. Based on this dialogue, it became apparent that NRC Region IV considered the plant outside the Limiting Condition for Operation (LCO) for containment integrity. With the blowdown line isolated, the plant was clearly not outside the LCO. Thus, it was never understood why Region IV took the position they did at that time.

In any event, without Technical Specification relief to allow a dedicated operator to open the blowdown valve for periodic blowdown, AP&L knew that the unit would have to be shut down because of degrading secondary water chemistry. As such, AP&L initiated discussions with NRC about the use of a dedicated operator as we felt the use of such an operator for manual isolation of the line would require a Technical Specification change. Under no circumstances were we intending to operate the unit in a manner less conservative than allowed by the Technical Specifications.

From statements made in the November 30, 1982, meeting with you, it seems that because we asked for an interpretation of the existing Technical Specification and inquired about the possibility of changing the existing Specification, NRC took the position we were operating non-conservatively and has incorporated such in this SALP report. Negatively impacting a licensee's SALP ratings for such communications has a tendency to stifle the free flow of dialogue on what may appear to be controversial or poorly defined subjects. This does not appear to be beneficial to either the utilities or the NRC.

Annunciators

On the subject of control room annunciators, AP&L recognized there existed a problem with the annunciators at ANO. The basic problem was also addressed by the NRC and INPO inspectors and generally recognized as:

1. Annunciator maintenance received low priority.
2. Annunciators contain alarms with nuisance circuitry.
3. Little human factor considerations were given during the engineering of design changes that affect the annunciators.

A systematic program was started in the latter part of 1981 to deal with the problems listed above. An annunciator philosophy was established to prevent new nuisance alarms from being added to the annunciators and to give guidance to the annunciator upgrade project group. The annunciator program goals are as follows:

1. No annunciator window should be lit during normal 100% power operation;
2. Only abnormal conditions are alarmed; the annunciators shall not contain nuisance alarms; and,

3. The annunciators are not to be used for normal status indication of a manual or automatic operation occurring except for actuation of safety systems.

Management support for the project is evident by AP&L's commitment to INPO to reduce the number of normally lit alarms and to increase the priority of annunciator maintenance.

The first phase of the project is to delete a total of 73 alarms (both units combined) that are not needed and combine 230 alarms in instances where operators have other means available to determine the exact problem. The Operations Staff compiled a list of these alarms and a licensing review was conducted to identify any conflicts with NRC and FSAR commitments. These efforts were completed for ANO-2 during the past refueling outage; and will be completed shortly for ANO-1 with the completion of the current refueling outage.

The second phase of the project consists of modifying nuisance alarm circuitry and is presently underway. Sixty-four nuisance alarm circuits have been identified in both control rooms. Fifteen nuisance alarm circuits were modified during the ANO-2 refueling outage. Four nuisance alarm circuits in the ANO-1 Control Room have been corrected. The remaining nuisance alarms (45) are being addressed by a team which is generating job orders and design changes to fix the alarms. The annunciator systems for both units will be monitored during startup after their respective refueling outages in order to identify persistent nuisance alarms.

Following and as an adjunct to the above work, AP&L is planning to address the human factor considerations as the next step in this project. This effort will include, but not be limited to, prioritizing alarms, changing window engraving, and moving alarms to more appropriate locations.

Procedures and Drawings

Significant management attention has been applied to the problem of updating procedures and drawings to reflect design changes. Recent changes in administrative controls of station modifications relate completion of procedure revisions and training required by modifications to the assessment of system operability. Significant improvement has been realized regarding our ability to produce accurately updated and legible drawings. The following is provided in support of this point.

In the previous SALP evaluation, the NRC noted that improvements were needed in the Drawing Control area. AP&L was also aware of this need at the time and we outlined our plans to correct the various problem areas in a letter to NRC dated September 30, 1981.

Our program involved several phases, which were each required to reach our ultimate goal of accurate, readable, and timely update of drawings. In addition, as you are aware, there was a large backlog of Design Change Packages (DCPs) which were not reflected on the plant drawings.

The basic phases were:

- Phase I Establish facilities and resources at ANO;
- Phase II Transfer the original drawings to ANO;
- Phase III Update the original drawings to agree with the site drawing;
- Phase IV Revise procedures to ensure a timely revision of certain drawings following DCP completion; and
- Phase V Complete closeout of backlog DCPs and establish controls to speed up the closeout process.

We have provided previous status reports on our progress in our letters dated September 1, 1981, October 25, 1981, and June 30, 1982. The current status of each phase is as follows.

Phase I

Construction of new facilities and procurement of the required reproduction and drafting equipment began in October 1981. Construction of the new facilities was completed in January 1982. The required drafting and reproduction equipment was received onsite shortly thereafter.

Additions to the staff were identified as a part of this phase. Four additional clerks were added to the existing staff to produce a total of seven clerks, and eight draftsmen were added to the existing staff of two. Significant difficulties were encountered in locating qualified draftsmen and full staffing was not accomplished until November 1982.

The cost of the building renovation and the reproduction equipment was in excess of \$400,000.

Phase II

The transfer of the original drawings (mylars) from the Little Rock office to the site began in January 1982 and was essentially completed in May 1982. Approximately 38,000 drawings were transferred to ANO. Each drawing was checked for quality, and its status relative to the ANO as-built conditions upon receipt.

Those drawings which were of poor quality or were not up to date compared to the ANO as-built conditions were earmarked for Phase III.

Phase III

The mylars which did not agree with the ANO as-built drawings or which were of poor quality were forwarded to drafting for updating or redrawing. To date we have updated approximately 2500 drawings (approximately 1/3 of those drawings forwarded from Phase II). In addition, 48 drawings were of such poor quality that they had to be completely redrawn.

Primary emphasis was placed on the Piping & Instrument Diagrams (P&IDs), with secondary emphasis being placed on electrical drawings, the remaining mechanical drawings, and civil, architectural, isometrics, and vendor drawings. Priorities were established based on the need to update the drawings most frequently used by plant operators.

Attached are examples (drawings M-204 and M-2230) of the quality of P&ID drawings issued in 1981 and the quality of drawings now in use. We believe the difference to be dramatic.

Phase IV

Procedure revisions are presently being drafted to require that P&IDs be updated to reflect as-built status prior to releasing the unit for startup from an outage. Additionally, procedural controls are being established to require specific time constraints to be met in closing out Job Orders which implement DCPs to ensure timely issuance of the remaining drawings.

Phase V

In October, 1980, AP&L contracted outside engineering support in order to closeout the large backlog of DCPs and to assist with the closeout of DCPs which were planned in subsequent outages. Initially, over 250 DCPs were identified which had been completed but not closed out. To date, we have closed out 550 DCPs. This figure includes many which were installed in subsequent outages. There are still 103 which have been reported complete but which have not been closed out. Of these, 62 are from the Unit 2 refueling outage just completed in November.

As it is evident that dedicated resources will be required to close out DCPs to avoid a large DCP backlog in the future, permanent staffing has been authorized for 1983 to replace the contracted engineers.

To date, we have expended approximately \$888,000 in this closeout effort.

We feel that significant progress has been made in the area of drawing control at ANO in the past few years. We have established onsite drawing control, improved drawing readability tremendously and reduced the turnaround time regarding as-built drawings. We have not, however, reached the goal we set for ourselves and will continue to improve the program as outlined above. We have expended many thousands of manhours and substantial dollars on this program, a program we expect will be a model for the industry.

B. Radiological Controls

1. Analysis

Three inspections were performed in this area during this evaluation period by the NRC Region IV Facilities Radiation Protection Section, and the resident inspectors conducted routine inspections in this area. The following paragraphs describe the six violations identified during these inspections:

- a. Two 55-gallon drums containing contaminated filters and stored in the auxiliary building drumming station were not properly labeled. (Both units, Severity V, 8129/8128)
- b. An administrative procedure was violated when seven safety related health physics procedures were implemented without deleting the superseded procedures. (Both units, Severity V, 8130/8129)
- c. Five radiation areas were not posted as required. (Both units, Severity V, 8201/8201)
- d. Certification records were not available for radioactive waste shipping containers used for several shipments. (Both units, Severity IV, 8214/8211)
- e. The licensee failed to adequately measure and evaluate the radiation hazard associated with beta radiation prior to maintenance personnel entering the lower primary manway area of a steam generator. (Unit 1, Severity IV, 8213)
- f. An ALARA committee review was not performed as required. (Unit 1, Severity IV, 8213)

2. Conclusions

The licensee is considered to be in performance Category 2 in this area. The total man-rem exposure during calendar year 1981 at the ANO units was about 851 man-rem, which was below the national average. The Radiation Protection Program has been maintained at about the same level of effort and effectiveness during this assessment period as compared to the previous period. NRC Region IV is concerned that appropriate corrective action had not been completed in a timely manner for identified open items. Eleven open items were identified during the assessment period. Of the 11 open items, corrective action had been completed for only 5 items. The licensee had devoted considerable effort to the revision and upgrading of existing health physics procedures.

The licensee's performance in the areas of radioactive waste management, effluent control, and confirmatory measurements has been satisfactory. No significant problems have been identified during the appraisal period in these areas.

NRC Region IV is concerned that ANO management has not given the necessary attention to the radioactive waste transportation program. Adequate procedures, staffing, and training have not been established for this area.

3. Board Recommendations

The licensee's radioactive waste transportation program should be reviewed to determine if this area has received adequate management attention for improvement. The status of identified open items should be reviewed to ensure that these are completed in a timely manner.

AP&L RESPONSE AND COMMENTS

AP&L believes significant progress has been made in many radiation protection areas beyond the few mentioned in the SALP report. The more significant of these accomplishments/improvements are listed below:

- ♦ Upgrade of the Health Physics Organization and addition of personnel;
- ♦ Health Physics personnel are now available on all shifts;
- ♦ Establishment of a Corporate Health Physicist position;
- ♦ New inhouse Health Physics training/qualification program implemented;
- ♦ Revision and upgrade of Radiation Protection Procedures;
- ♦ Completion of the renovation and upgrade of ANO health physics/chemistry working areas;
- ♦ Development and implementation of an ALARA program;
- ♦ Management adoption of a voluntary 5 rem per year radiation exposure limit for workers;
- ♦ Adoption of a collective annual exposure goal;
- ♦ Completion of hardware modifications and improvements on the ANO-1 waste gas system;

- ♦ Decontamination of the ANO 1 & 2 auxiliary buildings resulting in a significant reduction in personnel exposures;
- ♦ Completion of a thorough and comprehensive waste management audit;
- ♦ New radwaste handling and decontamination organization approved and in the process of implementation; and
- ♦ Participation in the development of the Central Interstate Radwaste Compact.

Although no one of these many accomplishments can be identified as most important, we believe that the implementation of a comprehensive ALARA Program (in early 1982) has resulted in a significantly increased awareness of radiation exposure control and reduction by all individuals at ANO. Personal involvement and participation in the ALARA Program by individual workers and all levels of management has resulted in a practical and effective program of exposure control.

Attendant accomplishments of restructuring the Health Physics Group; the development of an in-house Health Physics training and qualification program; the up-grading of radiation protection procedures; system and equipment modifications; and the reduction in the number of radiation/contaminated work areas, further serve to reduce exposure and accomplish the ALARA commitment.

AP&L realizes the critical need to properly and effectively manage and dispose of low-level radioactive waste. Among the advantages to be gained by such management are reduced radiation exposures and improved economic benefit. Because of the declining availability of disposal space, along with the rising costs of transportation and disposal, AP&L has reduced and must continue to reduce the radioactive waste volume generated at ANO, and to more effectively and efficiently manage the waste that is created. Operational practices, such as restriction of the amount of material that may be taken into radiological areas and waste segregation have already successfully demonstrated that volume can be reduced.

Addressing these issues, a Radwaste Handling and Decontamination Section has recently been approved for implementation in January 1983. The Radwaste organization will have personnel committed to the consistent control and management of radioactive waste. An accompanying Radwaste Handler's Training Program will also be ready for implementation in the January 1983 timeframe.

AP&L is committed to ALARA and the safe management of radioactive waste. We feel that significant progress beyond that mentioned in the SALP report has been made and deserves recognition.

Although satisfied that significant progress has been made, AP&L will nevertheless continue to strive to further improve the ANO Radiation Protection Program.

DECEMBER 20, 1982

We acknowledge your concerns (stated at the SALP meeting) regarding the "open items" in the radiation protection area. As this SALP response is being developed, efforts are underway to resolve these items.

C. Maintenance1. Analysis

Five inspections were performed in this area during this evaluation period by NRC Region IV personnel and the resident inspectors conducted monthly inspections of maintenance. The following paragraphs describe the seven violations identified in this area:

- a. A seismic support on a starting air line to an emergency diesel generator was not welded or bolted as required. (Unit 1, Severity IV, 8128)
- b. The licensee did not maintain one of the station battery racks in the design configuration. (Unit 1, Severity IV, 8130)
- c. A required pipe strap was missing from a seismic support on the starting air system of an emergency diesel generator. (Unit 1, Severity IV, 8204)
- d. Two of the three high pressure injection pumps were inoperable due to tagging out one pump for an oil change but changing the oil in another pump. This item was identified by the licensee and reported in LER 313/82-003/03L-0. (Unit 1, Severity IV, 8205)
- e. A seismic support on the service water return line from a low pressure safety injection pump seal cooler was not installed as required. (Unit 2, Severity IV, 8128)
- f. The licensee failed to properly install the seismic support discussed above, in that the pipe clamp bolts were all loose. (Unit 2, Severity IV, 8129)
- g. The channel C linear power level-high was not tripped as required, although the channel C excore nuclear instrument had been inoperable for more than 48 hours. (Unit 2, Severity IV, 8205)

The following three LER's were attributed to the maintenance area:

- a. Repair of the emergency feedwater pump turbine steam supply check valves (2MS-39A and B) was inadequate. The locking pin on the disc stud retainer nut was not tack welded as required, and the pin subsequently failed after valve reassembly. (Unit 2, 81-034/03L-0)

- b. The steam driven emergency feedwater pump tripped three times during a 3-day period due to a series of administrative and maintenance errors. (Unit 2, 81-038/03L-0)
- c. Both of the differential pressure indications for a reactor coolant pump failed due to moisture from a valve leak near the transmitters entering an open conduit box. (Unit 2, 82-010/03L-0)

2. Conclusions

The licensee is considered to be in performance Category 3 in this area. Weaknesses include insufficient on-the-job supervision by first line maintenance supervisors and a shortage of experienced maintenance technicians. Several instances of improper return to service of systems and components following maintenance or design changes have occurred. The licensee has taken steps to improve performance in this area by establishing nine maintenance coordinator positions. These maintenance coordinators relieve the first line supervisors of some of their administrative workload, enabling them to perform more job supervision. The planning and scheduling department has been placed under the maintenance manager and procedures have been revised to better support the maintenance supervisors and to better control the workload of the various shops. The on-the-job and classroom training programs for maintenance personnel have been upgraded during this evaluation period.

3. Board Recommendations

The licensee should continue the efforts mentioned above to permit more job supervision by first line maintenance supervisors. In addition, the licensee should increase the number of quality control department inspections of maintenance and design change activities, emphasizing proper job completion and system restoration. The licensee should consider expansion of the preventive maintenance program in the area of remotely operated valves. A review of LER's indicates numerous valve failures. The failure rate of remotely operated valves could probably be reduced by generating a stronger preventive maintenance program.

AP&L RESPONSE AND COMMENTS

The SALP Report identified the following weaknesses in the Maintenance area:

- ♦ Insufficient on-the-job supervision by first line Maintenance Supervisors;
- ♦ Shortage of experienced Maintenance Technicians; and,
- ♦ Ineffective Preventative Maintenance Program for motor operated valves.

Programs and practices as described below have been developed and implemented to address these weaknesses.

1. Insufficient on-the-job supervision by first line Maintenance Supervisors.

The first line Maintenance Supervisors' administrative workload limits them in providing the degree of on-the-job supervision that we desire. However, AP&L has developed and implemented several programs and practices to reduce the administrative workload of the first line Maintenance Supervisors. These include the following.

- a. A Spare Parts Inventory Management System (SPIMS) computer terminal has been installed in Planning and Scheduling. This enables the Planning and Scheduling Coordinator to more accurately determine the availability of spare parts prior to sending a job order to the shop to be worked, thus reducing the first line Maintenance Supervisors' involvement in researching, requisitioning, and checking on the status of spare parts. When possible, technicians and mechanics are being used to research, requisition, and check on the status of outage spare parts instead of first line Maintenance Supervisors.
- b. A Health Physics Technician is assigned to Planning and Scheduling during refueling outages to prepare Radiation Work Permits (RWPs) and coordinate Health Physics support for work in containment. This helps reduce the time demands on the first line Maintenance Supervisors.
- c. We have added the following positions to reduce the administrative workload and span of control of the first line Maintenance Supervisors:

- ♦ Two additional Maintenance Coordinators (an increase from 7 to 9);
- ♦ One additional Mechanical Maintenance Supervisor (an increase from 3 to 4 and a reduction in the ratio of mechanics to supervisor from 13-1 to 10-1);
- ♦ One Maintenance Clerk; and,
- ♦ Thirty-six shift maintenance employees (30 technicians/mechanics, 5 supervisors and 1 superintendent).

d. A fulltime clerk has also been added to support the Maintenance Facility Library.

2. Shortage of experienced Maintenance Technicians.

The past turnover rate of Maintenance Technicians has contributed significantly to the shortage of experienced Maintenance Technicians. AP&L has implemented the "Grow Your Own" concept whereby local people are hired and trained. A nuclear pay differential has been implemented for experienced maintenance technicians to help reduce their turnover rate.

To reduce the impact of inexperienced maintenance technicians on the Maintenance Program, more emphasis has been placed on hands on type training.

3. Ineffective Preventative Maintenance (PM) Program for Motor Operated Valves.

We presently have a program underway to conduct PM on approximately 1/3 of the safety-related motor operated valve operators on ANO-1 each refueling outage.

We are developing a program to conduct PM on approximately 25% of the safety-related valve operators on ANO-2 each refueling outage. We performed a complete PM on 12 safety-related valve operators during the recent ANO-2 refueling outage. We also performed a partial PM on 6 other safety-related valve operators. This activity ranged from installation and checkout to lubrication of valve stem and cleaning of operator.

AP&L has a strong overall management commitment to preventative maintenance in general, and we are aggressively involved in expanding our Preventative Maintenance Program to other appropriate areas.

D. Surveillance1. Analysis

Three inspections were performed in this area by NRC Region IV personnel, and the resident inspectors conducted monthly inspections of surveillance activities. The following paragraphs describe the four violations and one deviation identified in this area:

- a. The licensee failed to perform surveillance tests within the specified time interval. (Unit 1, Severity IV, 8134)
- b. The licensee failed to perform the required surveillance on sealed radioactive sources. (Both units, Severity V, 8201/8201)
- c. The licensee failed to complete a review of surveillance procedures and scheduling practices as committed. (Unit 1, Deviation, 8202)
- d. The licensee failed to perform surveillance on a hose reel station in a vital area. (Unit 1, Severity IV, 8215)
- e. The licensee violated an administrative procedure requiring the maintenance manager to report a new surveillance test requirement to the surveillance test coordinator. (Unit 2, Severity V, 8202)

Four LER's were attributed to the surveillance area:

- a. A reactor protective system amplifier gain was improperly set during surveillance. (Unit 1, 81-010/03L-0)
- b. Technical Specification requirements for the anticipatory trip bypass reset setpoints were not included in the surveillance test procedures. (Unit 1, 82-007/03L-0)
- c. Surveillance testing of the emergency feedwater actuation system was not performed within the specified time interval. (Unit 1, 82-011/03L-0)
- d. The core power distribution surveillance procedure did not include the appropriate rod bow penalty. (Unit 2, 81-044/03X-1)

2. Conclusions

The licensee is considered to be in performance Category 3 in this area. Improvement in performance is noted during this evaluation period, but further improvement is needed as evidenced by the number of instances of failure to perform surveillance tests when required.

AP&L RESPONSE AND COMMENTS

Regarding the SALP concern that further improvement is needed as evidenced by the number of instances of failure to perform surveillances when required, we have the following comments.

AP&L has put into effect the following practices to ensure the performance of surveillances:

- ♦ Individuals responsible for surveillances receive Design Change Package (DCP) implementation notification which instruct the recipient to ensure surveillances are revised in accordance with the DCP;
- ♦ Action is assigned to ensure procedures are revised to incorporate Technical Specification changes;
- ♦ The surveillance coordinator contacts the responsible supervisor for the status of any surveillance not completed by the scheduled completion date; and,
- ♦ An individual has been assigned full time to schedule, monitor, and track surveillance testing completion.

We are evaluating achievability of your recommendation of "zero defect" surveillance testing. We concur that the number of missed surveillance tests should be as few as possible and ideally zero. We will be looking at our programs in an effort to achieve this goal.

3. Board Recommendations

The licensee is urged to place greater emphasis on upgrading performance in this area. Closer attention should be given to incorporation of new Technical Specification surveillance requirements into the surveillance testing program and to ensuring timely completion of required surveillance tests.

Additional licensee management attention and involvement are needed in the surveillance area. Additional inspections and audits by the quality control and quality assurance departments would be beneficial.

AP&L RESPONSE AND COMMENTS

Regarding the SALP recommendation that "closer attention should be given to incorporation of new Technical Specification surveillance requirements into the surveillance testing program", we have the following comments.

- ♦ The Maintenance Superintendents have reviewed the Technical Specifications and the Master Test Control Log twice to ensure the Technical Specification surveillance requirements are included in the Master Test Control Log.
- ♦ The Operations Assessment Group reviewed the Technical Specifications and Master Test Control Log to ensure the Technical Specification surveillance requirements are included in the Master Test Control Log.
- ♦ Procedures are being reviewed to determine better methods for improving the control, cross-checking and tracking of Technical Specification surveillance requirement changes.

E. Fire Protection1. Analysis

Two inspections were performed in this area by NRC Region IV personnel and the resident inspectors conducted monthly inspections of housekeeping and fire protection. Two violations and one deviation identified in this area are described below:

- a. The cable spreading room contained an excessive amount of combustible material. (Unit 2, Severity V, 8128)
- b. The fire doors between the emergency diesel generator rooms were neither locked nor provided with electrical supervision as required. (Both units, Severity IV, 8215/8212)
- c. Electrical conduits penetrating the lintels above certain fire doors had unsealed air gaps external to the conduits. (Both units, Deviation, 8215/8212)

The three LER's attributed to this area are described below:

- a. Fire watches were not maintained at unsealed penetrations in fire barriers as required. (Unit 2, 81-029/03L-0)
- b. A hole was discovered which penetrated a fire barrier. (Unit 2, 81-036/03L-0)
- c. A conduit cover was missing from a conduit which penetrated a fire barrier. (Unit 2, 81-042/03L-0)

2. Conclusions

The licensee is considered to be in performance Category 2 in this area. The licensee maintains a full time fire prevention specialist on staff. Additionally, a task force was formed to review 10 CFR Part 50, Appendix R, requirements. The report of this task force was delivered to the NRC on July 1, 1982. At mid-year, the licensee increased the frequency of fire drills from one per quarter to one per quarter per fire brigade.

3. Board Recommendations

The licensee should continue to conduct a vigorous training and drill schedule in fire prevention but should also monitor the results thereof carefully to assure that maximum effectiveness is realized. The licensee should also pursue modifications required to meet 10 CFR Part 50, Appendix R. Additionally, greater attention should be given to the potential degradation of fire barriers. Continued emphasis should be placed on post maintenance cleanup.

AP&L RESPONSE AND COMMENTS

We plan to continue to conduct training and drills in fire protection/prevention as endorsed in the board recommendations. Periodic assessment of fire protection/prevention training effectiveness will be initiated. We recognize that the area of fire barrier degradation will require continued emphasis on our part. A second Safety and Fire Prevention Coordinator was added to the plant staff in July 1982. This addition will enable us to provide more attention to the fire protection/prevention area including potential fire barrier degradation and post maintenance cleanup.

During the months of May and June 1982, significant effort was dedicated to performing the required analysis and developing the documentation required by Appendix R to 10CFR50. The intensity with which this major task was accomplished, and the accuracy and timeliness of submittal of the resulting product clearly reflected AP&L's commitment to a strong fire protection program. The July 1, 1982, submittal resulted from many hundreds of manhours involving research of plant documentation, countless walkdowns to inspect existing plant features, and development of modifications acceptable to Appendix R criteria and in the most efficient manner possible.

Since July 1982, the following programs were begun:

- ♦ Approximately one man-month was devoted to reviewing available documentation (correspondence, fire hazards analysis, fire plan, etc.) from 1974 to July 1982 in order to identify all fire protection commitments. These commitments are, in turn, being independently verified to determine their status. Each of these commitments and the verification results will be further reviewed to determine what actions (if any) are necessary;

- ♦ A set of "study" drawings has been developed which indicate plant fire walls and doors. An effort is underway to physically walkdown all of the fire walls and doors to verify status. Results of these walkdowns will be reviewed to determine the necessity of any modifications as well as the formation of a formal data base for use in future surveillance and fire protection evaluations;
- ♦ A listing of fire doors has been developed for the purpose of identifying specific features of those doors (special exemptions, alarms, locked, etc.), reasons for fire door classification (Appendix R, equipment protection, insurance, etc.), specific surveillance requirements, and applicability of NRC reporting requirements; and,
- ♦ In an effort to provide a clear definition of AP&L's fire protection program, we have begun preparation of a consolidated "ANO - Fire Protection Program Description" which will provide a comprehensive, centralized collection of fire protection information which has been developed over the past several years. This resultant document, which will be controlled in much the same manner as the FSAR, will be a living document suitable for use not only by plant personnel (operations, fire brigade members, fire protection staff), but also by design and licensing engineers.

Although the majority of the above occurred and/or is underway outside of the SALP evaluation period, they are included as examples of AP&L's continuing emphasis on fire protection. Taking into account our elaborate Pre-Fire Plans, extensive Fire Hazards Analyses, training efforts, and our dedicated fire protection staff, AP&L has dedicated itself to fire protection and related improvements. This demonstrates our recognition of the importance of fire protection to our nuclear program.

F. Emergency Preparedness1. Analysis

An emergency preparedness appraisal was performed during this evaluation period. Six significant appraisal findings were identified during the appraisal and these were further addressed in a Confirmation of Action Letter dated August 19, 1981. These six items which required prompt action of the licensee are summarized below:

- a. Demonstration of onsite emergency organization augmentation capability.
- b. Submittal of a description of the licensee's capability to perform offsite radiological monitoring.
- c. Submittal of emergency plan implementing procedure changes demonstrating that adequate administrative and physical means exist to perform accountability of personnel during an emergency.
- d. Dissemination of information to the public population within the 10-mile emergency planning zone.
- e. Submittal of the AP&L Nuclear Contingency Plan and a revision to the ANO Emergency Plan.
- f. Integration of Emergency Action Levels into operating procedures.

In addition, 84 items requiring consideration for improvement in order to strengthen the emergency preparedness program were identified during the emergency preparedness appraisal. A management meeting was held in the NRC Region IV office on April 8, 1982, to discuss the findings of the emergency preparedness appraisal. In conjunction with the emergency preparedness appraisal, the ANO Emergency Plan was reviewed by the Emergency Preparedness Licensing Branch, Division of Emergency Preparedness, Office of Inspection and Enforcement. This review identified a number of deficiencies in the ANO Emergency Plan.

An emergency exercise was conducted during this evaluation period. This joint exercise involved local, state, and federal agencies. No violations were identified during the exercise, but a number of deficiencies were identified. These included failure to demonstrate shift augmentation capability, failure to demonstrate the capability to obtain

a reactor coolant system (RCS) sample, and failure to perform an isotopic analysis of RCS under simulated accident conditions. In addition, personnel evacuated from the plant during the exercise were not monitored for radioactive contamination.

An unannounced inspection was performed to determine the status of the licensee's public notification system. This inspection revealed that many residents inside the 10-mile emergency planning zone, but outside the areas covered by sirens, did not have tone alert radios. A Confirmation of Action Letter was issued on July 30, 1982, requiring a house-to-house survey in the affected areas and distribution of tone alert radios where needed. The licensee distributed almost 1000 tone alert radios on July 31, 1982.

2. Conclusions

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

3. Board Recommendations

Licensee management attention and involvement in the emergency preparedness area should be increased. Priority attention is required to resolve the deficiencies referred to above and which are still outstanding. During the next emergency exercise, the licensee should minimize the number of activities simulated in order to fully demonstrate the capability to perform in those functional areas necessary for emergency response and assessment. The licensee should take action to develop and implement a formal training program for emergency response personnel.

AP&L RESPONSE AND COMMENTS

Emergency Planning at Arkansas Nuclear One has been and continues to be one of AP&L management's highest priorities.

Prior to the TMI accident, AP&L had worked closely with the State of Arkansas to achieve one of the few "concurred in" state emergency plans to augment the ANO Emergency Planning efforts.

As details of the TMI accident became available, it quickly became apparent to AP&L management that a complete reevaluation of the ANO Emergency Planning effort was necessary to enhance our response capabilities based on information available for the first time from TMI. As a result, AP&L formed a "Task Force" in June 1979 to evaluate our response capabilities. The results of this evaluation, completed in the fall of 1979, were recommendations for improvement in several areas. Most notable of the improvements made as a result of this Task Force's recommendations are:

- ♦ A new Emergency Control Center (ECC) of approximately 70,000 square feet in area designed specifically for Emergency response at a cost in excess of 7,000,000 dollars;
- ♦ Included in the ECC is a 200+ seat auditorium designed specifically for Emergency media conferences;
- ♦ A new expanded and secured 4 channel radio system designed specifically for Emergency and Security response needs;
- ♦ A new redundant microwave-linked telephone system connecting ANO to the Little Rock General Offices, which was designed to separate AP&L telecommunications from local phone companies and associated traffic problems;
- ♦ An expanded Emergency Response Organization incorporating top management, communications, logistical support, security, technical and non-technical support, and recovery; and,
- ♦ Development of new Emergency Plans and Procedures outlining and utilizing a company-wide Emergency Response.

In addition to these items, AP&L has demonstrated that it is an industry leader in Emergency Planning activities as evidenced by our activities in the following areas:

- ♦ As a result of AP&L's innovative design and use of the Primary Technical Support Center (TSC) and a Secondary TSC, Mr. Eisenhut (of NRC) modified the NRC design positions on these facilities to allow other utilities to utilize the concepts developed at AP&L;
- ♦ The Emergency Control Center (ECC) and Technical Support Centers implemented by AP&L were operational in the spring 1981, one of the earliest operational dates for permanent facilities of any utility in the nation;
- ♦ The Early Warning System (EWS) designed and installed in the 10 mile Emergency Planning Zone (EPZ) for ANO was one of only 6 in the United States installed and operational by the originally required implementation date of July 1, 1981;

- ♦ AP&L is in the final implementation stages of our Safety Parameter Display System (SPDS), a state-of-the-art computerized system to acquire and display plant parameters to Control Room and Emergency Response personnel designed specifically to accommodate the needs of these personnel in an emergency situation. Development and implementation of this system will ultimately cost several million dollars; and,
- ♦ A Gaseous Effluent Radiation Monitoring System (GERMS) has been developed which will access real time meteorological and gaseous effluent monitoring data to graphically plot dose projections for the 10 mile EPZ.

The NRC's appraisal performed in August 1981, some twenty months after submittal of our revised plan in December 1979, identified six significant findings which were promptly addressed by AP&L in our letter of September 1981. Eight months after the appraisal, NRC provided us a written evaluation of their 1981 appraisal which contained many new items not previously identified to AP&L. The 84 preparedness improvement items identified in the March written evaluation were addressed by AP&L in April and May within sixty days of their receipt. No violations or deviations were identified during this appraisal.

A subsequent evaluation by NRC in July 1982, resulted in a letter 3 months later to AP&L indicating 37 of the original 84 items needed additional information or were otherwise remaining open. Of these 37 items, actions have been completed or are scheduled to be complete in the near future on approximately half of these items. The remaining items are addressed in our December 20, 1982, (0can128211) response.

The review of our Emergency Plan by the Division of Emergency Preparedness identified a "number of deficiencies." This review was apparently not coordinated with the Emergency Plan Appraisals as a significant number of the "deficiencies" identified were duplicates requiring a duplicate response from AP&L. In addition, the review was apparently based on an outdated copy of the Emergency Plan resulting in identification of "deficiencies" which had been corrected at the time of the review.

It is significant to note that more than 2 years elapsed before NRC provided the first written evaluation of our Emergency Planning activities other than our Category 1 rating in the previous SALP report. AP&L has endeavored to respond to all of NRC's concerns in a timely and appropriate manner and will continue to do so.

The SALP report indicates that a number of deficiencies were identified during the Emergency Planning Exercise. The Inspection Report containing these items was provided to us over five months after the exercise and thus these items were only recently received. We agree there are areas in which our planning activities can be improved and an exercise is an excellent means of identifying such areas. However, no violations of or

deviations from requirements were identified during the exercise. We believe that referring to improvement items as "deficiencies" is unduly negative and may be misleading to the public. The fact that our exercise identified these improvement items attests to the overall quality of the exercise and should be viewed as a positive accomplishment and not as a sign of inadequacies in this area, as does the SALP report.

In addition, it should be noted that a significant number of these deficiencies involved the scenario used by AP&L to conduct the exercise. We have previously asked for guidance from NRC as to the contents of a scenario and have received none. We again request such guidance.

On another issue, we question the inclusion of the unannounced inspection and subsequent Confirmation of Action Letter in July of 1982, into this SALP report as these events occurred outside the evaluation period. If they remain in this evaluation, we assume that these items will not be included in the 1982-83 appraisal .

AP&L's methodology for distribution of Tone Alert radios was previously presented to both NRC and FEMA in meetings and met with the approval of both. For the two years after those approvals, AP&L received absolutely no indication that its program failed to satisfy all applicable requirements/regulations. Indeed, the first indication of any concern in this area was a phone call from NRC (on July 29, 1982) to senior AP&L management threatening shutdown of the ANO facilities. We believe that such action by the NRC was precipitous and uncalled for. Moreover, AP&L feels identification of a concern in such a manner as NRC used in this case is totally inappropriate and counter productive to desired Emergency Planning goals and necessary working relationships.

In response to NRC concerns, AP&L developed a program to deliver Tone Alert radios door-to-door to eligible residents in the 10 mile EPZ. This program was developed and implemented within two days involving over 100 AP&L personnel working evenings and weekends.

While AP&L is concerned with the apparent inappropriate inclusion of this event in this SALP as discussed above, this concern is significantly outweighed by our concerns over the lengthy delays in NRC responses to AP&L inquiries and of the seeming unwillingness of NRC to discuss potential problem areas in a timely and appropriate manner.

We believe AP&L and ANO have one of the most aggressive, innovative and best emergency capabilities in the nation.

To further enhance our capabilities, we have added an additional full time Emergency Planning Coordinator at ANO and plan to add a full time Contingency Plan Coordinator in the General Office in 1983.

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We feel that our capabilities would be enhanced even more if the NRC would identify areas of concern in a timely manner and advise us of those concerns. At bottom, however, we feel that the Category 3 rating in the SALP report unfairly downgrades AP&L based upon the Tone Alert Radio matter of last summer. This to us seems arbitrary and counter productive to the aim of AP&L to create a mutual understanding and trust between AP&L and the NRC staff.

AP&L is committed to excellence in our Emergency Planning efforts and capabilities. Anything less would be short of our goals and not in keeping with our strong felt responsibilities to protect the public health and safety. We will strive to address all of your concerns in a timely and appropriate manner to achieve your mutual concurrence on all matters of regulatory significance.

G. Security and Safeguards

1. Analysis

Three inspections were performed during this evaluation period by NRC Region IV personnel. In addition, one inspection of Unit 2 safeguards activities was conducted by NRC Region III personnel. The resident inspectors made frequent checks on the implementation of the ANO Industrial Security Plan. Two violations identified in this area are described below:

- a. Operation of the security inverter was not in accordance with the requirements of the ANO Industrial Security Plan. (Both units, Severity V, 8128/8127)
- b. The licensee failed to properly control security keys. (Both units, Severity IV, 8213/8210)

The licensee issued a number of reports of security system impairment as required by 10 CFR Part 73.71.

2. Conclusions

The licensee is considered to be in performance Category 2 in this area. Licensee corporate management frequently is involved in site activities. There has been a continuing problem associated with the failure of the central and secondary alarm station systems requiring the frequent use of 10 CFR Part 73.71 reports and the use of compensatory measures. The problem is related to many unnecessary alarm reports received through the systems. The corporate and site management personnel have been attempting to correct the problems in the security system. These actions have been technically sound and the approaches thorough. There have been no major violations during this evaluation period. Events are properly identified and analyzed.

3. Board Recommendations

The licensee should continue to pursue resolution of the cause of the frequent 73.71 reports. Additional resources at the corporate level appear to be required to better coordinate the implementation of the established plan to resolve the problems with the security systems.

AP&L RESPONSE AND COMMENTS

The conclusions of the SALP Board indicated the following problem areas associated with the Security System:

- ♦ Continuing problems associated with the failure of the Central and Secondary Alarm Station systems; and
- ♦ Too many unnecessary Alarm reports.

On the positive side, the SALP Board also stated, in the conclusions section of the SALP report, that the Licensee's corporate management was frequently involved in site activities, the Licensee's corporate and site management personnel have been attempting to correct the problems, and the actions have been technically sound and properly identified and analyzed.

While we concur with the SALP Board's conclusions, we feel strongly that the Security and Safeguards area is in performance Category 1.

We have recognized, from the initial installation of the Security system, the need to improve the Central and Secondary Alarm Station systems and to eliminate the unnecessary alarm reports being processed by the system. Furthermore, we have provided the NRC, specifically the Region IV staff, substantial information detailing the specific problem areas and our planned actions to resolve these problems from the outset. This information has been provided on our own initiative.

In a presentation to the Region IV staff in June 1981, we provided a detailed discussion of the Security System problem areas and our plans and schedules for resolving these problems. We have continued to update the staff on our progress. A detailed status report (OCAN088209) was issued on August 20, 1982, recapping our progress to date.

The status report indicated that substantial progress had been made in the overall operation of the system and a significant decrease in system alarms has been achieved. In addition, we addressed in detail the 10CFR73.71 reports that had been issued since May 1981.

During the SALP meeting on November 30, 1982, the NRC staff indicated that the basis for the Category 2 rating was mostly due to the frequent 10CFR73.71 reports and the delay in resolving the identified problem areas. We believe that the "frequency" of reports in itself is not necessarily significant. In this case, we believe that it is essentially unrelated to the overall quality and effectiveness of a Security and Safeguards system. Title 10CFR73.71 requires a report for system outages as small and insignificant as 1 second. We previously requested relief from this overly restrictive regulation in our above mentioned August letter. We are still awaiting your response. A relevant measurement of the quality of our Security and Safeguards system is a measure of the period of time it is available and actually performing its security role. As previously reported to you, the availability of our computerized system during the period May 17, 1981, to November 30, 1982, was in excess of 99.8%. Furthermore, as we outlined in our August 20, 1982, status report, our compensatory measures that are implemented during any outage are significant and add a substantial element to our overall Security Program. We believe this is a most remarkable achievement which seems to have been overlooked by the Board. Such an availability factor for any computer system is clearly outstanding.

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However, AP&L currently has planned substantial modifications to further improve reliability and to reduce the number of unnecessary alarms.

As we previously informed you, AP&L formed a Security Task Force in April 1981, comprised of both key corporate and site personnel. This Task Force reports directly to the Vice President, Nuclear Operations and is responsible for directing the overall improvement plan for the Security System. This concept was presented to the Region IV staff in June 1981, and the progress made by the Task Force was reported in the August 20, 1982, status report. One aspect of the overall improvement plan has been to reduce system alarms. The implemented improvements to date have resulted in a reduction of alarms by a factor of 10. This represents a substantial improvement over previous operational experience.

The SALP Board recommended that additional resources at the Corporate level appear to be required to better coordinate the implementation of the established plan in order to resolve the "problems" with the Security System. After a review of the Security Task Force concept, activities and personnel, the NRC apparently modified their recommendation indicating that sufficient corporate involvement with the Security System existed within the Task Force, and that the recommendation really meant that additional personnel should be added to the Corporate Security staff. AP&L had already planned to add an additional individual to the Corporate Security staff in 1983.

Given the extremely high reliability of the Security System, the improvements in alarms, and the indication by NRC that corporate involvement in the Security System was adequate, we believe our performance in this area was biased by inappropriate or inaccurate consideration and should have been rated a Category 1.

H. Refueling Activities1. Analysis

No refueling outages were conducted during this appraisal period. Refueling outages are scheduled in August 1982 for Unit 2, and in November 1982 for Unit 1.

2. Conclusions

None

3. Board Recommendations

The licensee should take steps to assure that plant personnel are adequately trained for the infrequent activities which will occur during the 1982/1983 refueling outages.

AP&L RESPONSE AND COMMENTS

None.

I. Licensing Activities

1. Analysis

No inspections specifically covering the licensing activities area have been conducted by NRC Region IV personnel. However, in the course of routine inspections by the resident inspectors, the following two violations, one deviation, and one unresolved item relating to licensing activities were identified:

- a. The licensee failed to submit an LER describing the conditions that led to operation in a degraded mode due to a failure to perform a required surveillance test in the specified time interval. (Unit 2, Severity IV, 8124). The licensee disagreed with the NRC Region IV position that failure to complete a surveillance test in the required time interval implies inoperability of the affected equipment, thus operation in a degraded mode, requiring an LER. The licensee has proposed a Technical Specification change in order to avoid future interpretation problems.
- b. The licensee did not have a current copy of the facility operating licenses posted or available elsewhere at the plant site. (Both units, Severity V, 8130/8129)
- c. An operating procedure was not revised to reduce post-accident radiation levels as committed. (Unit 2, Deviation, 8211)
- d. The licensee failed to submit Technical Specification change requests resulting from modifications from the Fire Prevention Safety Evaluation Report within the time frame indicated in the facility license. (Unit 2, Unresolved Item, 8212)

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

Additional licensee management attention is necessary to assure that statements made to the NRC are complete and accurate. Licensee management must assure that commitments to the NRC are fulfilled. When commitments cannot be kept or must be changed, the licensee should inform the NRC promptly.

AP&L RESPONSE AND COMMENTS

With regard to your concerns with the accuracy of statements, AP&L fully recognizes the absolute importance of relaying correct, accurate and timely information to the Staff and Commission. Although this has always been of high priority and has been strongly stressed to all levels of AP&L employees, we do recognize the needs for tighter controls in this area.

As such, AP&L has implemented an extensive program addressing this and other areas. This program has both interim and long term improvement areas. The interim program (now in effect) consists of:

- ♦ New procedures for the development of regulatory responses which delineates mechanisms needed to achieve timely responses as well as related responsibilities;
- ♦ New procedures for verification of the accuracy of information submitted to regulatory agencies;
- ♦ A new procedure for use of our computerized tracking system used to track open commitments to NRC;
- ♦ Unique physical identification of Design Change Packages and information packages involving information being developed for regulatory responses to highlight and ensure that individuals involved with these documents are aware their work involves commitments to the NRC;
- ♦ Dedication of engineering resources to assure all NRC open commitments are being properly tracked; and,
- ♦ Initiation of a study to determine appropriate means of prioritizing NRC issues.

In addition to these interim actions, AP&L is proceeding with development of a Regulatory Response and Commitment Control Program to further improve our approach toward review and control of letters and commitments to the NRC. This Program is intended to encompass and supersede the existing

programs mentioned above. We have outlined an initial approach to the development of this Program which we intend to follow at this time. We have structured the Program with sufficient flexibility so that it may be modified as we proceed to assure that we are addressing the cause of any problem we identify in the areas covered by the Program. The following is a summary of the five phases we have identified at this time which represent our approach to the development of the program.

- A. (Phase 1) Define objectives and goals of the program through discussions with AP&L management personnel, review of the existing Regulatory Response Programs, and evaluation of existing procedures and systems. Develop recommended action plans for establishing a system for tracking commitments already implemented (i.e., passive commitment tracking) and for revising procedures at Arkansas Nuclear One (ANO) and the Little Rock General Office (LRGO) to incorporate appropriate provisions for controlling commitments. Develop methods for verification of actions taken on previous commitments. This phase will include evaluation of established working systems at other utilities for possible use by AP&L. This phase is now approximately 90% complete.
- B. (Phase 2) Review AP&L files for the period beginning January 1, 1979 to the present time in order to identify and tabulate all commitments made to the NRC. Prepare commitment packages that can be used for later verification and tracking. This phase is now complete.
- C. (Phase 3) Using commitment packages prepared in Phase 2, verify appropriate implementation at ANO or LRGO through review of documentation and installed systems and equipment using the methods established in Phase 1. This may involve statistical sampling of commitments, with some groups of commitments receiving 100% verification due to safety implications or management decisions. This Phase is underway and is approximately 1/3 complete.
- D. (Phase 4) Develop and implement a system for tracking of commitments already completed (i.e., a passive commitment tracking system) using the approach identified in Phase 1. This system will supplement the active commitment tracking provided by our present centralized commitment tracking system. This Phase will begin following completion of Phase 1.
- E. (Phase 5) Revise applicable procedures related to the control of design change packages, job orders, procedures, correspondence, commitment tracking, quality assurance, quality control and other activities using the approach defined in Phase 1 to incorporate appropriate provisions for controlling commitments. This Phase will begin following completion of Phase 1.

In order to provide added assurance that our actions (both interim and long term) are appropriate, we have initiated further reviews of these

actions. In particular, the Safety Review Committee has reviewed the actions at recent meetings and will monitor progress of the action plans through review of the periodic status reports. An independent review of our interim actions has also been performed by an outside consultant who concluded that those actions were appropriate.

As a further check of our actions, we have contacted the Institute of Nuclear Power Operations (INPO) to arrange for an independent assessment of the results of Phase I of the Regulatory Response and Commitment Control Program as well as an independent assessment of the activities of our Plant Safety Committee and Safety Review Committee. The independent assessment of the committee activities will look at the meaningfulness of their reviews in assessing nuclear safety considerations from the proper perspective.

With regard to your concerns of needed improvements in commitment tracking, we concur (as evidenced by the above programs) that additional improvement is needed. However, the significant progress that was achieved during the evaluation period which was not addressed by the SALP Board.

Specifically, as reported in our letter dated May 13, 1982, AP&L has implemented a computerized commitment tracking system (COMTRAC) for all open NRC commitments. This system was developed internally at AP&L and tailored specifically to meet the needs of AP&L and NRC. The development effort consumed hundreds of manhours culminating in implementation of an operational system on April 30, 1982. This system was physically demonstrated to NRR personnel (during their visit to our offices) during the evaluation period. We did offer to demonstrate the system to Region IV personnel as well, but our offer was declined.

Implementation of this system represents a significant devotion of AP&L resources oriented toward an area we fully recognize as one deserving attention. This recognition by AP&L management will continue throughout our long-term program and beyond. We do feel, however, it represents a significant achievement that was not appropriately noted and recognized by the SALP Board.

J. Training

1. Analysis

One inspection in this area was performed by NRC Region IV personnel and the resident inspectors reviewed the training program implementation periodically during this evaluation period. One violation and one deviation which were identified in this area are summarized below.

- a. The licensee failed to complete initial training to mitigate core damage (as required by NUREG 0737 and as committed to in a letter from the licensee to the NRC) by October 1, 1981. (Both units, Deviation, 8029/0128)
- b. Licensed operators had not received the required training on the procedure and equipment modifications associated with the design change on the fire detection instrumentation system. (Unit 2, Severity IV, 8204)

2. Conclusions

The licensee is considered to be in performance Category 2 in this area. Improvements have been made in several areas of training, including:

- a. A comprehensive training program for maintenance personnel that combines classroom lectures (including lecture series by equipment vendor representatives), formal on-the-job training, and hands-on shop training.
- b. Requalification training program for licensed operators that combines the establishment of a dedicated training shift as part of the shift rotational cycle and an improved curriculum.
- c. Professional and supervisory training that includes such program as ASME and IEEE Code training for engineers and management training courses for supervisory personnel.

AP&L RESPONSE AND COMMENTS

AP&L appreciates the Board's acknowledgment of the training improvement made during the evaluation period. However, AP&L feels that significantly greater improvements have been made than the SALP report indicates. In addition to the three areas mentioned as having improved during the

evaluation period, the following significant training related items should be included to further put into perspective the resources expended and the results achieved by AP&L in providing quality employee training.

- ♦ During the evaluation period, the ANO Training Center became operational. The Training Center is a ~ 70,000 square foot multipurpose facility dedicated to training and which would additionally serve as the emergency response facility during a plant emergency. AP&L believes the center to be one of the finest training facilities in the nuclear industry.
- ♦ During the evaluation period, AP&L consumated contracts and began the acquisition and construction of two plant specific full scope simulators.
- ♦ During the evaluation period, the authorized training staff was increased from twelve positions to thirty three positions.
- ♦ Agreements were made with the University of Arkansas at Little Rock and Arkansas Tech University to provide night classes (from their Engineering curriculum) at the ANO Training Center.
- ♦ The training expended by AP&L during the evaluation period included approximately 175,000 employee manhours spent on training at a cost of approximately \$4,500,000.
- ♦ The passing success of our RO/SRO license candidates was ~ 84% during the evaluation period, which increased significantly from the passing success of the prior evaluation period (~ 43%).

3. Board Recommendations

The licensee should continue to give priority to quality training. The licensee should place priority on attaining a sufficient number of high quality, qualified instructors, minimizing the use of contractor personnel as classroom instructors. The training of operators and technicians on procedure and equipment modifications resulting from design changes should be upgraded.

AP&L RESPONSE AND COMMENTS

AP&L agrees with the Board recommendations. It is AP&L's intent to continue its efforts in providing quality training to its employees and reducing its dependence on consultant instructors. Contractors currently being used by AP&L are providing training and instruction under AP&L programs not under contracted programs. Regarding the Board recommendation to upgrade the training of operators and technicians on procedure and equipment modifications resulting from design changes, changes were made in October 1982 to the design change process to require identification and initiation of action taken on training and procedure changes needed as a result of each design change package.

K. 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. Management involvement and control in assuring quality was considered by the SALP Board during its discussions of each of the other functional areas. In addition, the licensee's management and review process was discussed in a NRC/AP&L management conference held in the NRC Region IV office on March 9, 1982.

Licensee management attention and involvement in safety-related activities at Arkansas Nuclear One are quite evident, and licensee management places a high priority on the safe operation of the nuclear units. Senior members of AP&L management make frequent visits to the site, keeping themselves aware of current problems and the progress being made in various performance improvement programs. Licensee management generally has been responsive to problem areas identified by the NRC and by the Institute for Nuclear Power Operations (INPO).

Other areas indicating strong licensee management controls include:

- Effective planning of activities and assignment of priorities
- An increasingly effective quality control program
- A good system for records control
- The corrective action systems generally recognize and address nonreportable concerns as well as reportable events
- The establishment of a shift maintenance organization
- A generally well controlled and documented procurement program
- The generally timely resolutions to technical issues.

Areas which require increased management attention include:

- Ensuring the accuracy of statements to the NRC
- The design change process, especially the postinstallation inspections and drawing and procedure updates
- Ensuring compliance with safety related procedures
- The radioactive waste transportation program
- The control of onsite contractor activities
- The postmaintenance inspections
- The surveillance test scheduling and completion
- The maintenance of fire barrier integrity
- Improvements to the emergency preparedness program, especially correction of identified deficiencies
- The identification and resolution of generic or causally linked failures of plant equipment
- Commitment tracking
- Coordination and communications between the site and the corporate office, particularly in the area of licensing activities

2. Conclusions

The licensee is considered to be in performance Category 3 in this area. Satisfactory performance with respect to operational safety is being achieved, but weaknesses are evident.

The SALP Board was concerned that licensee management controls were insufficient to coordinate the completion of testing required by IE Bulletin 80-06, "ESF Reset Control" for Unit 2 in a timely manner. In addition, management controls were insufficient to prevent or detect an inaccurate statement in a letter to the NRC, stating that the required testing had been completed. This item was identified as a deviation in Unit 2 NRC Inspection Report 82-05.

3. Board Recommendations

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

AP&L RESPONSE AND COMMENT

AP&L has no specific comments in this area. Our specific comments to these individual items are provided elsewhere in this document.

However, we do have a general comment. It appears that the inclusion of this review section (included in this SALP for the first time) is simply a consolidation and repeat of all the other areas in the SALP report. It does not seem appropriate to indicate specific "problem areas" and "deficiencies" and then repeat all of them as attributable to management. By doing such, the SALP indicates that if any problem or deficiency is identified, it is a management problem by definition and another area for a low rating. This appears to us to be unjustified.

V. Supporting Data and SummariesA. Licensee Report Data1. Licensee Event Reports (LER's)

The Regional SALP Board reviewed the LER's for the period of July 1, 1981, through June 30, 1982. This review included LER's 50-313/81-09 through 81-14 and 82-01 through 82-13 for Unit 1, and 50-368/81-25 through 81-45 and 82-01 through 82-23 for Unit 2.

The classification of cause of event and number of LER's during this report period (7/1/81 through 6/30/82) are listed as follows:

<u>Cause</u>	<u>Unit 1</u>	<u>Unit 2</u>
Component Failure	11	30
Defective Procedure	1	2
Design/Fabrication Error	4	6
External Cause	0	0
Personnel Error	3	6
Other	0	0
TOTAL	19	44

- 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. The Board noted that several of the LER's with a component failure cause code could have been assigned design/fabrication error cause code since the necessary corrective action involved or will involve a design change.

AP&L RESPONSE AND COMMENT

We believe significant progress has been made during this evaluation period in the number of LERs filed. Although this fact is not specifically addressed by the SALP report, the following is a table contrasting the number of LERs in the previous period with the number from this evaluation period.

<u>CAUSE</u>	<u>UNIT 1</u>		<u>UNIT 2</u>	
	<u>1981</u>	<u>1982</u>	<u>1981</u>	<u>1982</u>
Component Failure	15	11	53	30
Defective Procedure	4	1	3	2
Design/Fabrication	3	4	8	6
External Cause	0	0	1	0
Personnel Error	3	3	5	6
Other	<u>2</u>	<u>0</u>	<u>5</u>	<u>0</u>
TOTAL	27	19	75	44

AP&L has several in-house mechanisms to identify recurring problems at ANO. The Operations Experience Assessment Group (OEAG) at ANO reviews a variety of documents for applicability to ANO. This includes performing an analysis of Reports of Abnormal Conditions (RACs) for recurring problems.

The Availability Engineering Section in the General Office conducts an independent review of RACs to identify trends of recurring problems. Personnel from Availability Engineering and OEAG meet as required to discuss the results of the two reviews. This independent review was instituted in response to an INPO recommendation.

AP&L has also instituted another program to identify recurring problems. This program is called Solving/Tracking Repetitive Equipment Problems (STREP). STREP takes input from several functional areas within ANO, e.g., Operations, Maintenance, and Special Projects. Representatives from each area rank identified problems in order of priority. Short term and long term problems are considered separately. The individual rankings are merged into composite short term and long term lists. The two prioritized lists are submitted to ANO Management for concurrence and action.

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

- (1) Emergency feedwater pump steam supply valve failure (81-09)

AP&L RESPONSE AND COMMENT

AP&L considers this problem CLOSED. The referenced LER was for a torque switch problem. A new procedure (1403.03) was written to control and document torque switch settings.

(2) Weld leak in decay heat removal system (81-13)

AP&L RESPONSE AND COMMENT

AP&L considers this problem CLOSED. The referenced LER discussed a vibration induced failure and a hanger that was added to reduce drain line vibration.

(3) Reactor coolant leakage from reactor coolant pump seal pressure sensing lines (82-01)

AP&L RESPONSE AND COMMENT

AP&L considers this problem OPEN. Engineering is underway for a design change to reduce vibration of the pressure sensing line. Installation is anticipated during the current refueling outage. The referenced LER (82-01) was not a sensing line failure, per se, but was a loose flange bolt.

(4) Steam generator tube leak (82-12)

AP&L RESPONSE AND COMMENT

AP&L considers this problem OPEN (NRC considered the referenced LER closed as a result of an inspection at ANO during October 1982). Engineering is

completed for a steam generator upper tube sheet vent. Installation is anticipated during the current refueling outage. This modification will assist in wet layup of the steam generator. Another action underway is 100 percent inspection of the lane area tubes during every refueling outage. The B&W Steam Generators Owners Group is evaluating long term solutions.

- (5) Failure to perform surveillance test when required (82-11)

AP&L RESPONSE AND COMMENT

AP&L considers this problem OPEN (NRC considered the referenced LER closed as a result of an inspection at ANO during October 1982). The referenced LER cited a failure to perform a surveillance test on the emergency feedwater system. This test is required to be conducted during a mode change. In order to preclude this problem from recurring, this particular surveillance test was placed as a signed procedural step in the heat-up procedure (Proc 1102-02). Even though the specific problem in the referenced LER should not recur, we will continue with our efforts to improve the overall surveillance testing program. As part of this effort, we will investigate the "zero defects" approach suggested by NRC during the SALP meeting on November 30, 1982.

- (6) Hydrogen purge system failure (82-10)

AP&L RESPONSE AND COMMENT

AP&L considers this problem OPEN. Engineering has been completed for changes in piping to help prevent water carryover into the filter system. Installation is anticipated during the current refueling outage. Long term modifications are still being evaluated.

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

- (1) Condenser off-gas monitor failure (81-33)

AP&L RESPONSE AND COMMENT

AP&L considers this problem CLOSED. A new detector design has been installed. This detector has an epoxy coating around the radiation element to protect it from moisture. Even though this item is closed, the validation will require one full summer/winter cycle.

(2) Charging pump failure (81-28 and 82-12)

AP&L RESPONSE AND COMMENT

AP&L considers this problem CLOSED. An ANO engineering report showed that the cracked cylinder head (LER 82-12) was due to cavitation. The cavitation resulted from problems with the volume control tank level. The level indicator was repaired. LER 81-28 was due to blown packing, and was not related to 82-12.

(3) Weld leak in charging system (82-07)

AP&L RESPONSE AND COMMENT

AP&L considers this problem CLOSED. An engineering report showed that an incorrect charge on the accumulator leads to very high vibration. A procedure was written for improved maintenance control of the accumulator via adjustment of the accumulator pressure at various loads.

(4) Degraded fire barriers (81-29, 81-36 and 81-42)

AP&L RESPONSE AND COMMENT

AP&L considers this problem OPEN. Some procedures have been revised to give additional administrative emphasis/control. Additional revisions are planned. Work in this area continues.

- (5) Fouling of service water piping and coolers
(81-35 and 82-03)

AP&L RESPONSE AND COMMENT

AP&L considers this problem OPEN. The chemical cleaning performed during the recent refueling outage improved service water flow appreciably. A long term plan and specific repair/replace criteria for individual coolers and piping will be developed.

- (6) Control element assembly calculator failure
(82-05 and 82-09)

AP&L RESPONSE AND COMMENT

AP&L considers this problem OPEN (NRC considered the referenced LER closed as a result of an inspection at ANO during October 1982). AP&L is currently investigating the Core Protection Calculator System. The results of that effort will be evaluated from the perspective of CEAC problems.

- (7) Dropped control element assembly (81-31 and
82-04)

AP&L RESPONSE AND COMMENT

AP&L considers this problem OPEN (NRC considered the referenced LER closed as a result of an inspection at ANO during October 1982). AP&L has made adjustments in the CEDMCS cabinet during the recent refueling outage to alleviate contact failure problems. Work continues on developing the proper voltage setting for the upper gripper mechanism.

- (8) Emergency feedwater valve failure (81-32, 81-45, 82-08, 82-15, 82-18 and 82-19)

AP&L RESPONSE AND COMMENT

AP&L considers this problem OPEN. Procurement action has been initiated to replace 2CV-1025 and 2CV-1075. Suitable replacements are being sought for 2CV-1036, 2CV-1037, 2CV-1038, and 2CV-1039. Four of the six referenced LERs involved valve 2CV-1075.

- (9) Battery charger supply breaker trip (81-39 and 82-23)

AP&L RESPONSE AND COMMENT

AP&L considers this problem OPEN. Engineering calculations are underway to determine if the breakers need changing to a larger size.

- (10) Reactor coolant leakage from reactor coolant pump seal pressure sensing line (82-17)

AP&L RESPONSE AND COMMENT

AP&L considers this problem OPEN. Engineering is underway to produce a design change similar to that for the Unit 1 RCP seal pressure sensing line.

(11) Containment atmosphere radiation monitor failure
(82-22)

AP&L RESPONSE AND COMMENT

AP&L considers this problem CLOSED. This is in agreement with NRC's conclusions resulting from an inspection at ANO during October 1982. The problem with this failure was environmental in nature. The ductwork has been rerouted and the ventilation system repaired. This should alleviate the temperature related problems.

(12) Motor operated valve breaker control power fuse
blown (81-43 and 82-02)

AP&L RESPONSE AND COMMENT

AP&L considers this problem CLOSED. All ANO-2 safety related MCC fuse sizes were verified during the recent refueling outage.

(13) Control room emergency chiller failure (81-40)

AP&L RESPONSE AND COMMENT

AP&L considers this problem OPEN. The referenced LER was written due to a leaky fitting. This leak was repaired. An engineering evaluation determined that the problem with the emergency chiller was resolved. The system is currently under observation.

2. Part 21 Reports

None

AP&L RESPONSE AND COMMENT

None.

B. Licensee Activities

1. Unit 1

July 1981 - two-week outage to repair reactor coolant leakage from 'A' steam generator primary manway flange and to replace two reactor coolant pump shaft seals.

August 1981 - one-week outage to replace three reactor coolant pump seals.

October 1981 - commenced decreasing power at approximately 1% per week due to secondary-side fouling of 'A' steam generator.

March 17, 1982 - secured 'D' reactor coolant pump due to indication of imminent shaft seal failure. Continued operating with three reactor coolant pumps.

March 26, 1982 - commenced a five-week maintenance outage. Repaired cracked/damaged thermal sleeves on A, B, and D high pressure safety injection nozzles. Replaced three reactor coolant pump shaft seals. Replaced main feedwater nozzles inside the 'A' steam generator.

May 25, 1982 - commenced a two-week outage to plug ten tubes in the 'A' steam generator. One tube had been leaking, the other nine exhibited unacceptable wall thickness degradation.

2. Unit 2

July 1981 - completed low power physics testing and commenced Mode 1 operation after refueling outage.

September 1981 - two-week outage to replace the 'A' reactor coolant pump seal. Damaged No. 2 emergency diesel generator when it was motorized while performing maintenance.

January 1982 - two-week outage due to failure of T_{HOT} RTD's to pass surveillance requirements.

April 1982 - two-week outage to repair a leaking 'B' steam generator blowdown line inside containment.

AP&L RESPONSE AND COMMENT

None.

C. Inspection Activities

The following is a summary of the major inspection activities, including major team inspections, that occurred during the evaluation period for Units 1 and 2:

- During the period of August 3-14, 1981, a team of three NRC inspectors and three NRC contractor personnel from Battelle Pacific Northwest Laboratories conducted an appraisal of the licensee's emergency preparedness program. This inspection involved 340 man-hours of inspection effort for each unit.
- During the period of March 31-April 2, 1982; April 12-16, 1982; and June 1-3, 1982; regionally-based NRC inspectors observed and monitored the licensee's repair activities relating to the damaged thermal sleeves for A, B, and D high pressure injection nozzles for Unit 1. This inspection effort involved a total of 84 man-hours.
- On May 19, 1982, the Regional Administrator for NRC Region IV, assisted by various members of his staff, arrived onsite and participated in the licensee's annual emergency preparedness exercise. An NRC resident inspector was also a participant onsite, and the Region IV emergency response center was fully activated during the exercise. NRC personnel from NRC headquarters, assisted by NRC contractor personnel from Battelle Pacific Northwest Laboratory, provided observers for both the licensee's activities and NRC Region IV activities during the exercise.

AP&L RESPONSE AND COMMENT

None.

D. Investigations

Investigators from NRC Region IV conducted an investigation of the licensee's actions relating to their response to IE Bulletin 80-06.

AP&L RESPONSE AND COMMENT

None.

E. Escalated Enforcement Actions

No civil penalties or enforcement orders were issued to the licensee during this evaluation period; however, three Confirmation of Action Letters (CAL) were issued:

- On August 19, 1981, a CAL was issued to the licensee to confirm the agreements reached between the licensee and NRC Region IV during the management exit interview following the NRC emergency preparedness appraisal conducted during the period August 3-14, 1981.
- On April 9, 1982, a CAL was issued to the licensee to confirm the agreements reached between the licensee and Region IV during a meeting in the Region IV office on April 8, 1982, and in telephone discussions on April 9, 1982, concerning the adequacy of the licensee's response to IE Bulletin 80-06.
- On July 30, 1982, a CAL was issued to the licensee to confirm agreements between the licensee and NRC Region IV concerning distribution of tone alert radios to residences inside the 10-mile emergency planning zone but outside the areas covered by sirens.

AP&L RESPONSE AND COMMENT

As we discussed with you during our meeting on November 30, 1982, AP&L does not believe Confirmation of Action Letters constitute "escalated enforcement action" as they are simply an acknowledgement by NRC that we will perform certain actions we have already volunteered.

During the meeting, NRC acknowledged that "escalated enforcement action" was an improper classification and that the SALP report would be modified to correct this.

F. Management Conferences

During this appraisal period, one management conference was held. This conference was conducted in the Region IV office on April 8, 1982, concerning the licensee's response to the NRC emergency preparedness appraisal report issued on March 9, 1982, and concerning the adequacy of the licensee's response to IE Bulletin 80-06 for Unit 2.

AP&L RESPONSE AND COMMENT

We wish to note that this conference was held at the request of AP&L. Due to the recognized importance of these two issues, we believed such a conference was appropriate and beneficial to both NRC and AP&L.

ATTACHMENT 1

Facility Name: Arkansas Nuclear One, Units 1 and 2 (ANO 1&2)
Licensee: Arkansas Power & Light Company (AP&L)
NRR Project Manager: Guy S. Vissing (ANO-1)
Charles M. Trammel (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, 1981 to June 30, 1982.

The basic 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 1-1.

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 no 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 evaluation of the following licensing activities:

Response to NUREG-0737 Items

Adequacy of Electrical Distribution System

Environmental Qualification of Electrical Equipment

Emergency Feedwater System Activities

Operator Licensing and Training Activities

HPI Nozzle ISI (Thermal Sleeve)

Station Blackout

Failed Fuel Problem

Appendix H Exemption Request

OTSG "A" Problems

Waste Gase H_2/O_2 TS

Steam Generator Water Chemistry

Appendix R 7-1-82 submittal

RTD response time amendment

AP&L RESPONSE AND COMMENT

We note the obvious omission of AP&L's FSAR update program required by 10CFR50.71. This program, conducted over a two year period, represented a substantial effort on AP&L's part. The results of the program have substantially augmented our research capabilities and control of Licensing base documents.

This program has consumed over 50,000 manhours and has incurred expenditures of almost \$2,000,000 (including the cost of procurement of 2 new computer systems dedicated to the update and maintenance of the FSARs). Physical demonstration of this program was conducted for NRR personnel on at least two occasions during the evaluation period.

The culmination of the program was the early submittal of a high quality document that far exceeded the requirements of applicable regulations. We cannot overemphasize the impact this program continues to have on our ability to research our safety analyses and to provide the NRC with thoroughly prepared responses. We are disappointed that such a massive and important program with such outstanding and beneficial capabilities has gone unnoticed by the SALP Board.

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 license activity levels listed above. Typical areas where management involvement was evident are in meeting the requirements of Emergency Feedwater System Activities, Operating Licensing and Training, OTSG "A" Activities, responses to NUREG-0737 and the Appendix R submittal. Areas where management involvement appears to have been weak is in meeting the requirements of the Technical Specification change related to the H_2/O_2 limits in the waste gas system and the request for the Exemption to the requirements of Appendix H.

AP&L RESPONSE AND COMMENT

As you note, there were a number of areas in which AP&L's management involvement and approach was appropriate. The majority of the areas addressed above constitute very significant events and issues that transpired during the evaluation period.

There were two areas in which you indicated your dissatisfaction with our performance. We concur that these items could have been handled in a more timely manner. However, their relative significance, as compared to the other items and issues, seem to be disproportionately weighted.

We concur completely that we did not promptly address the Appendix H issue. As you have indicated, the quality of the response was good. We acknowledge that the timeliness could have been improved, however. Specific modifications have been implemented in our Commitment Tracking System to eliminate this problem.

You indicate repeatedly that our response to the H_2O_2 Technical Specification "requirement" was "poor." In preparing our response to this item, we have conducted a complete review of the initiation, development, and current status of this item. We note some significant contradictions to the positions discussed by NRC in our November 30, 1982, meeting.

The H_2O_2 issue originated from the ANO-1 RETS review conducted in June of 1980. In September, 1980, AP&L received a verbal request from Mr. G. Vissing (NRC) to submit a Technical Specification change for the hydrogen/oxygen monitoring system. Although no formal request or requirement was ever issued to AP&L, we did submit a Technical Specification change request on the schedule requested by Mr. Vissing.

Several conversations took place to discuss the basis for our change request. No formal documentation was issued to AP&L to discuss NRC's dissatisfaction with our change request or to provide any guidance as to what might be acceptable to NRC. In addition, AP&L has not received from NRC its technical basis for requesting such a modification.

In February 1982, Mr. Vissing indicated (verbally) that NRC could not accept our position and that we should commit to the installation of redundant hydrogen/oxygen analyzers. Although no formal requirements or documents had been issued to AP&L on this issue, we agreed to make the verbally requested modification.

It should be noted that the reason AP&L has not submitted a Technical Specification on the redundant H₂O₂ analyzers is because they have not yet been installed. We feel it inappropriate and inconsistent with past practices of the NRC to develop Technical Specifications for nonexistent systems. We have provided a schedule for installation and will be submitting a Technical Specification change request following installation.

We contend that all our actions taken on this issue were strictly voluntary. We did not and do not believe that this is a significant item as no formal guidance has been provided by NRC. Further, the NRC has not issued any binding requirements governing this item. AP&L believes that if an item is of such a nature as to constitute Technical Specification changes and/or addition of plant hardware, the NRC should provide its technical basis for such changes. In addition, to the extent the NRC wishes to impose such changes, the staff position should be subject to review by NRC management and should be subjected to a value impact analysis.

Our efforts in this area have been substantial, resulting in voluntary participation in NRC sponsored reviews and expenditures in excess of 2 million dollars. These efforts have gone unnoticed due to Mr. Vissing's dissatisfaction with our response to a "requirement" that does not exist. In our opinion, the positions taken by Mr. Vissing represent an unsubstantiated and inappropriate use of the SALP process.

To formalize the record on this issue, we will be providing (in the near future) a status report which details the complete history of this item, the correspondence and conversations involved, related activities AP&L has completed or underway, and which restates our position.

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

The overall rating for this attribute is Category 2 with the performance rating for individual licensing action ranging from 1 through 3. The areas of greatest weakness were in licensing activities related to environmental qualification of electrical equipment and the waste gas H_2/O_2 limits.

AP&L RESPONSE AND COMMENT

In addition to our comments above on the H_2O_2 issue, the following comments apply to the environmental qualification of electrical equipment issue.

AP&L has been aggressively involved with the environmental qualification issue for a number of years. In 1977 and 1978 we conducted a complete re-review and upgrade of ANO-2 electrical equipment. In 1979 and 1980 we conducted two separate reviews and submitted substantial documentation in response to IE Bulletins 79-01, 79-01A, and 79-01B.

During this evaluation period, AP&L has submitted a status of all our safety related electrical equipment as required by IE Bulletin 79-01B. In addition, NRC requested we submit Justifications for Continued Operation (JCO) for all equipment that did not meet the newly upgraded requirements of IE Bulletin 79-01B. Although ANO's equipment does meet the qualification levels required at the time they received their Operating Licenses, some components did not meet the upgraded and conservative criteria of Bulletin 79-01B.

NRC's request for additional information supporting our original JCOs was responded to immediately and appropriately. We met with NRC in Bethesda, Maryland the day following the verbal request to assure we had a complete understanding of the request and schedule. Utilizing significant resources from two separate consulting firms, AP&L generated and submitted a substantial response consistent with NRC's requested schedule. Development of this response consumed hundreds of engineering manhours, a significant number of which were expended nights and weekends. In addition, AP&L expended a considerable amount of effort in late 1981 to respond to the Environmental Qualification Safety Evaluation Reports. Such thoroughness and responsiveness is representative of AP&L's past approaches to this issue.

We were disappointed with Mr. Vissing's statements in the November 30, 1982, meeting by which he indicated our "3" rating for responsiveness in this area was due to our late response to the request for information on high energy line breaks and submittal of test reports to Franklin Laboratories. The request for the additional test report information to Franklin Labs constituted the review and duplication of a large volume of information much of which had already been submitted to NRC and/or Franklin Laboratories. Indeed, many of the requested documents were our copies of documents written and published by Franklin Labs. In addition,

much of the information requested relating to high energy line breaks was contained in the ANO-1 FSAR. Thus this request was understandably given a lower priority than other NRC requests being received and worked on at the time. Although the submittal was delayed beyond the formally requested date, we had obtained verbal agreement with Mr. Vissing to delay our schedule. Prior to the verbally agreed upon schedule, Mr. Vissing verbally informed us that the previously agreed upon due date was no longer valid and he would be sending us a letter informing us we were late with our response and requesting submittal within a specified number of day. AP&L responded within the specified time.

During the November 30, 1982 meeting, we asked the basis for the "3" responsiveness rating and whether or not it was representative of the entire environmental qualification effort or the above instance involving submittal of documentation to Franklin Labs. Mr. Vissing responded that it was not representative of the entire effort but was representative of the "aggravation level" experienced by him on the one request for information to Franklin Labs. AP&L again questions Mr. Vissing's use of the SALP process in such a manner. However, we are pleased that our entire environmental qualification effort is being viewed positively as a whole.

On another issue, we wish to acknowledge the assistance and responsiveness of the NRR staff, particularly on the Appendix R and RTD response time amendment issues. The meetings and telecons arranged for Appendix R discussions significantly augmented our understanding of NRC's positions, thus providing valuable assistance to us in preparing our responses. The thorough and timely review of our RTD response time amendment was very much appreciated.

C. Responsiveness

For individual licensing actions examined for this assessment, category ratings varied from 1 to 3. The licensee's performance on only several of the actions examined were judged to fall into Category 3 - notably in the area of environmental qualification of electrical equipment, and the waste gas H₂/O₂ limits TS change.

The performance on the waste gas H₂/O₂ TS change was particularly poor. In other areas the licensee's responsiveness is judged to have been complete. The licensee has shown a tendency to be late in responding to staff requests.

AP&L RESPONSE AND COMMENT

See our above comments to Item A.

D. Enforcement History

There is no important basis for an NRR evaluation of this attribute.

AP&L RESPONSE AND COMMENT

None.

E. Reportable Events

Generally, this attribute has not been applicable. In the areas where it has been applicable, notably in the areas related to failed fuel problems, the HPI injection nozzles problem and the OTSG "A" problems the reporting has been timely and complete. The same remark applies to the RTD response time degradation problem on ASG-2.

AP&L RESPONSE AND COMMENT

None.

F. Staffing

There has been no licensing basis to judge this area except in the area of Operator Licensing and Training which is judged to be Category 2. An area of staffing which has affected other licensing activities has been the licensee's staffing for licensing activities. This area would be benefited by the assignment of additional experienced personnel.

AP&L RESPONSE AND COMMENT

This comment is very similar to the one made by NRR in our previous SALP report. It is disappointing to note that NRR did not acknowledge our significant progress made in this area. This has been a topic of continual discussion with NRC during this past evaluation period.

Specifically, the AP&L Licensing Engineering Staff is completely staffed to its 1982 authorized engineering level. This represents the first time in almost 5 years the Licensing engineering staff has been completely filled. In response to the previous SALP report, AP&L immediately approved additional positions for the Licensing Section. As a result, the number of engineers has increased from 7 last year to 9 this year with an overall increase in industry experience from 20 manyears last year to over 39 manyears this year.

We acknowledge additional Licensing resources could be utilized here and have approved such for 1983. However, we believe we have made substantial progress which appears to have gone unnoticed.

G. Training

This attribute is most applicable to the operator licensing and training activities. The performance is judged to be Category 2. The results of the operator licensing program has indicated much improvement in training over the previous year. The passing rate has improved.

AP&L RESPONSE AND COMMENT

Please see our previous comments to Section IV.J.

V. Conclusion

Based on the evaluation of seven attributes of AP&L's performance for fourteen 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 although staffing in certain areas could be improved, and satisfactory performance with respect to operational safety is being achieved. The licensee's initial responses to concerns are usually, but not always timely. Responses to additional requests are not always timely and responsive. The plant staff's capability and availability to provide timely response to the licensee's licensing staff's initiatives relating to the NRC requests are not always evident.

AP&L RESPONSE AND COMMENT

During the previous evaluation period, AP&L implemented a new organizational structure in its Licensing Section to improve responsiveness to NRC. Specifically this reorganization reflected the NRC's use of Project Managers by providing a Supervisor for each of our ANO units as the specific point of contact with NRC. We believe our Licensing personnel are best able to select the correct AP&L individual to provide responses to NRC requests. As such, we have repeatedly requested that contacts from the NRC Project Managers be directed to our Licensing Supervisors and staff.

We have noted Mr. Vissing's comments that he has had difficulty in directly contacting ANO personnel from whom he feels it a necessity to obtain information. Such attempts to directly access ANO personnel may not meet with the desired responsiveness results as the ANO organization is not intended or structured for such activities. We have established a Special Projects Section at ANO which, among other duties, assists the General Office Licensing Section in licensing matters and internally coordinates licensing issues at ANO. However, this Section is not intended to be a direct point of contact with NRR. This Section has substantially increased the responsiveness of our organization as a whole and contributed to the overall quality of our responses.

In addition, continued circumvention of our established communication paths will defeat the purpose for which they were established. The potential exists for repeat of recent events whereby Mr. Vissing made the same request to both the ANO and Licensing staffs, which resulted in duplicative efforts internally. This causes an unnecessary waste of limited resources which could be used in developing responses to other NRC items. It is additionally disturbing that the request of Licensing was over a week after the request was made and responded to by the ANO staff.

In response to Mr. Vissing's concerns with regard to the inefficiency of the telephone system used by our Licensing Staff, modifications have been made to more conveniently accommodate the Project Managers. We will

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provide you with a letter detailing the modifications and the overall operation of the telephone system.

We wish to acknowledge the three day visit (during the reporting period) by Mr. Trammell (NRR) to our offices. Such visits significantly improve the understanding of our operations and provide for improved communications.

VI. Recommendations

The licensee's system to assure that NRC response dates and commitments to the NRC is not fully effective. When commitments and response dates cannot be kept or must be changed, the licensee should inform the NRC promptly.

The licensee should improve the availability of plant staff to respond to NRC requests, particularly those requests that relate to prior licensee responses. The licensee should improve the means to respond to NRC initiatives by increasing the licensing staff and/or providing contractual assistance.

AP&L RESPONSE AND COMMENT

Please see our previous responses to Items C and F and Section V.
