ENCLOSURE 2

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

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Report No.:	50-313/97-18; 50-368/97-18
Licensee:	Entergy Operations, Inc.
Facility:	Arkansas Nuclear One, Units 1 and 2
Location:	Junction of Hwy. 64W and Hwy. 333 South Russellville, Arkansas
Dates:	October 20 through November 7, 1997
Inspectors:	William P. Ang, Senior Reactor Inspector, Maintenance Branch Clifford A. Clark, Reactor Inspector, Maintenance Branch Charles S. Marschall, Senior Project Engineer, Project Branch C
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ATTACHMENT: Supplemental Information

EXECUTIVE SUMMARY

Arkansas Nuclear One, Units 1 and 2
NRC Inspection Report 50-313/97-18; 50-368/97-18

Three NRC Region IV inspectors performed an inspection at Arkansas Nuclear One from October 20 through November 7, 1997. The inspectors used NRC Inspection Procedure 40500 to evaluate the licensee's effectiveness in identifying, resolving, and preventing issues that could degrade the quality of plant operations or safety.

The inspectors determined that the licensee had a good corrective action program and that conditions that could degrade the quality of plant operations were, for the most part, effectively identified, resolved, and prevented.

Operations

- The licensee generally used condition reports very effectively for documenting conditions adverse to quality, determining sound root causes, addressing operability and reportability requirements, identifying generic concerns, and ensuring that plant staff implemented corrective actions in a timely manner (Section O1.1).

- The in-house events assessment group, the condition review group, and the corrective action review board played key roles in the licensee's corrective action program implementation and were effectively accomplishing their review functions (Section O1.1).

- Operations department personnel had a very good understanding of the corrective action process and used the process to effectively identify and correct deficient plant conditions (Section O7.1).

- Control room deficiencies and operator work-arounds were few and well managed (Section O7.1).

- Quality assurance audit requirements were appropriately implemented. Good quality assurance audits with meaningful results were performed (Section O7.2).

- A noncited violation was identified for the inadvertent program omission of the requirement to perform emergency and security plan audits under the cognizance of the safety review committee (Section O7.2).

- The program for evaluating operations' performance consisted of three different types of assessment that, taken together, provided very effective assessment (Section O7.3).

- Review of documentation indicated that the safety review committee was effectively performing the review and audit functions required by the quality assurance manual operations (Section O7.4).

- The plant safety committee was generally effective in assuring safety for emerging activities, such as modifications and procedure changes. However, a 10 CFR 50.59 violation was identified for the failure to perform a written safety evaluation for a plant safety committee-approved change to a procedure definition of a "continuous fire watch," as described in the Final Safety Analysis Reports (Section O7.5).

- The reviews and corrective actions for operating experience were controlled and that the industry events analysis program was managed appropriately. The licensee effectively incorporated industry experience into the corrective action program (O7.6).

Maintenance

- Condition reports were adequately dispositioned (Section M2.1).

- Job orders were properly used for the repair and replacement of plant equipment (Section M2.2).

- The backlog of corrective maintenance job orders was appropriately tracked (Section M2.3).

- The external material condition of the observed structures, systems, and components appeared to be good (Section M2.4).

- The licensee assessments were effective in identifying good recommendations for maintenance; however, the licensee did not aggressively followup on some recent assessment findings (Section M7.1).

- The established process for management field observations of maintenance activities was not aggressively implemented (Section M7.2).

Plant Support

- While housekeeping in both units was generally good, housekeeping in the Unit 2 control element drive mechanism control system room was poor (Section M2.4).

Report Details

Summary of Plant Status

Both units were operating at full power at the beginning of the inspection period. On October 21, 1997, a capacitor failure on the 5-volt power supply for the Unit 1 "B" feedwater control system resulted in a "B" feedwater pump trip and subsequent power reduction to 40 percent power. The licensee completed repairs and brought Unit 1 back to full power on October 23, 1997. Unit 1 was operated at full power for the remainder of the inspection period. Unit 2 operated at full power during the entire inspection period.

I. Operations

O1 Conduct of Operations

O1.1 Condition Reporting Process

a. Inspection Scope (40500)

The inspectors reviewed the licensee's implementation of the site's condition reporting process to determine if issues that could degrade the quality of plant operations or safety were being appropriately identified and corrected. The inspectors reviewed approximately 41 condition reports and discussed issues with both management and working-level personnel. The inspectors performed walkdowns of various accessible areas of the plant, observed equipment condition, and observed work performance by plant personnel.

b. Observations and Findings

Administrative Procedure 1000.104, "Condition Report Reporting and Corrective Actions," Revision 13 PC-1, specified the licensee's primary process for identifying, evaluating, and resolving conditions adverse to quality. The procedure required individuals to initiate a condition report whenever a condition was discovered. The procedure defined the term "condition" as "failures, defects, deviations, malfunction or deficiencies of Q-list, F-list, or S-list plant equipment/materials that could potentially render the equipment inoperable or negate its ability to perform its safety function." Documentation errors, power plant transients, adverse trends, security infractions, human factor errors, test or procedure errors, nonconformances, abnormal occurrences, or any other circumstances that could or have adverse consequences were also defined as "conditions."

Administrative Procedure 1000.104 required an individual, who identified a condition, to document the condition in a condition report form and report the condition, through the appropriate supervisor, to the operations shift superintendent. The procedure required

the shift superintendent to ensure that each condition report was logged, assessed for equipment and system operability, and evaluated for immediate reportability. The procedure required an In-House Events Analysis (IHEA) representative to pick up condition reports in the control room each workday morning. The plant staff was required to provide a copy of the condition report to the licensing department for performance of the reportability reviews in accordance with 10 CFR 50.72, 10 CFR 50.73, and 10 CFR 21. The procedure required the licensee to perform an initial review of the condition report for repetitiveness of the condition, generic implications of the condition, and mitigating or corrective actions taken or initiated. The plant staff was required to document the results of the review on the condition report form and to provide a recommendation for significance and potential administrative disposition. The plant staff was required to provide the condition report documentation to the condition review group within 1-work day of their receipt of the condition report.

The condition review group reviewed condition reports every workday morning. The condition review group was required by Administrative Procedure 1000.104 to be composed of a minimum of three of the directors and plant managers. The procedure assigned the responsibility for significance determination, assignment of root-cause evaluations, and consideration of operability and reportability to the condition review group. The condition review group was required to assign condition reports to a responsible manager for determination of cause and to develop and implement a corrective action plan. The procedure also assigned the responsibility to administratively close a condition report, if appropriate, to the condition review group.

Administrative Procedure 1000.104 required the performance of a root-cause determination for significant condition reports. The procedure established the composition and functions of a corrective action review board. The procedure specified that the corrective action review board be comprised of department managers to whom a particular corrective action may be assigned, and other key plant personnel associated with the development of root cause or assignment of corrective actions. The procedure specified that the corrective action review board be chaired by the affected plant manager, or a director designated by the condition review group. The procedure required the review and approval of the root-cause evaluation and the proposed corrective action plan, for significant condition reports, by the corrective action review board.

Upon satisfactory completion of the condition report corrective actions, Administrative Procedure 1000.104 required the IHEA supervisor, or designee, to review the corrective actions taken, assess the adequacy of the corrective actions, and verify completeness of the documentation. The procedure assigned the IHEA supervisor the responsibility to either formally recommend additional corrective actions or close the condition report. The procedure assigned IHEA to track and trend condition reports and to provide management reports of condition report trends.

The inspectors observed four condition review group meetings, two corrective action review board meetings, and a special group meeting for a Unit 2 feedwater pump trip that occurred during the inspection. The inspectors noted that the meetings were well managed and focused primarily on problem resolution and plant safety. The inspectors observed good discussion of issues during the meetings and noted the technical expertise of meeting participants contributed to thorough and complete evaluation and resolution of the conditions that were discussed.

During the inspection, adverse conditions observed by the inspectors during tours of the plant and observation of work activities were generally already identified by the licensee by means of condition reports. One exception was a poor housekeeping condition observed in the Unit 2 control element drive mechanism control system room discussed in Section M2.4 of this inspection report.

The inspectors found, during review of condition reports, that conditions adverse to quality were appropriately characterized and were assigned appropriate levels of significance. Operability and reportability determinations reached appropriate and well-founded conclusions. The root-cause evaluations included the appropriate level of review, were typically very thorough, and reached reasonable conclusions. Corrective actions specified were appropriate for the identified root causes, and were comprehensive. The corrective actions included consideration of generic implications, repetitive deficiencies, and industry experience.

Emergency Lighting System Condition Reports

During discussions with IHEA personnel regarding the scope of Administrative Procedure 1000.104, the inspectors were informed that emergency lighting system deficiencies identified during performance of surveillance and preventive maintenance tasks were being corrected by means of job orders and were not required to be documented by means of condition reports. The inspectors noted that Administrative Procedure 1000.104 required the initiation of condition reports for fire protection "conditions" and questioned why emergency lighting failures were not considered fire protection "conditions." The licensee issued Condition Report C-97-0313 during the inspection to document the failure to write condition reports on emergency lighting deficiencies.

The inspectors reviewed and discussed with system engineers the results of the last quarterly emergency lighting system tests performed in both units in October 1997. The inspectors determined that two deficient emergency lights in Unit 1 and seven deficient emergency lights in Unit 2 were identified during performance of the quarterly surveillance test. The inspectors determined that condition reports were written for the

deficiencies, as a result of Condition Report C-97-0313, and necessary operability evaluations and compensatory actions were performed. During inspections of various areas of both units, the inspectors visually inspected and requested the licensee to depress the test button of approximately six randomly selected emergency lights. All emergency lights appeared to function appropriately during the random checks.

During the last week of the inspection period, the inspectors determined that the emergency lighting system was included in the scope of the Maintenance Rule program. The inspectors discussed with licensee personnel how they tracked emergency light failures. The licensee informed the inspectors that they tracked condition reports and performed separate surveillances on emergency lights. The inspectors were unable to confirm that emergency lighting failures identified in job orders and not in condition reports were also being included in the condition monitoring and functional failure analysis of the Units 1 and 2 emergency lighting systems. The inspectors questioned the completeness of the monitoring program if emergency lighting failures previously documented in job orders only, were not included in the program.

The licensee issued Condition Report C-97-0328 to identify and evaluate the applicability to the Maintenance Rule program for failing to write condition reports on emergency lighting system deficiencies. Pending completion of the licensee's determination of the consequences for failing to write condition reports on emergency lighting deficiencies, as identified by Condition Reports C-97-0313 and C-97-0328, and further review by the NRC, the failure to write such condition reports was identified as an unresolved item (50-313, -368/9718-01).

Unit 2 Main Steam Safety Valve Deficiencies

The inspectors reviewed, and discussed with system engineers, Condition Report 2-97-0152, Licensee Event Report 50-368/97-005-00, and the root-cause evaluation report for Condition Report 2-97-0152, associated with out-of-tolerance, as-found, lift setpoints of Unit 2 main steam safety valves (MSSVs). The subject documents reported that eight of ten Unit 2 MSSVs, which were tested prior to and during the May 1997 refueling outage, had as-found lift values that exceeded the maximum 1 percent tolerance allowed by the technical specifications.

As part of the evaluations performed for Condition Report 2-97-0152, the licensee evaluated the effect of the as-found MSSV conditions on the various Unit 2 design basis accident analyses. The licensee determined that the limiting analysis for the observed out-of-tolerance conditions was the loss-of-condenser vacuum analysis. The licensee determined that the average out-of-tolerance, as-found value was plus 2.71 percent. The licensee noted that a previous loss-of-condenser vacuum analysis had been performed using plus 3 percent MSSV setpoint and acceptable analysis results were obtained. The inspectors questioned the use of average MSSV setpoint values for analyzing the as-found, out-of-tolerance conditions. The licensee representative informed the inspectors that, subsequent to the condition report evaluation, an analysis

was performed using the as-found, lift setpoints and it determined that the MSSVs would have adequately performed their safety functions during the previous operating cycle.

The inspectors noted that the Condition Report 2-97-0152 root-cause analysis report, dated June 23, 1997, documented a long history of previous Unit 2 MSSV setpoint out-of-tolerance conditions. Six MSSVs in 1989, three in 1991, seven in 1992, one in 1994, and four in 1995 were found outside specified tolerances. The inspectors also noted that the report stated that numerous licensee evaluations and investigations of the identified condition did not reveal a conclusive root cause for the problem. The cumulative effect of a number of different factors was believed to be the most probable cause of the high, as-found, MSSV settings. Two of the identified probable causes related to previous offsite testing conditions and design configuration of the valves.

The root-cause analysis report stated that the previous MSSV lift settings were performed by Wyle Laboratories. As part of the root-cause evaluation, licensee's maintenance and system engineers attempted to determine the effects of varying soak pressure, insulation, and ambient temperature on valve setpoint. The goal of the tests was to have the test facility match the temperature profiles in the plant to establish an as-left setpoint or an appropriate correlation factor.

However, Wyle Laboratories was unable to match the test facility to plant conditions or to satisfactorily perform the test to determine a suitable correlation. Another Entergy facility, Waterford 3, had similar MSSVs. Based on discussions with Waterford 3 maintenance engineering, the licensee contracted with NWS Technologies to reperform the test plan that was attempted at Wyle Laboratories. Initial results of the testing at NWS Technologies were similar to Wyle Laboratories. However, subsequent reviews determined that a chimney effect, due to the dual exhaust configuration of the MSSVs in the plant, was causing lower body temperatures in the plant than the temperatures at the test facilities. NWS Technologies was subsequently able to configure the test facility to approximate the plant configuration and attain the lower body temperatures. Subsequent tests determined that restricting the MSSV exhaust resulted in significantly higher valve body temperatures and lower valve lift pressures. The MSSVs with out-of-tolerance setpoints were sent to NWS Technologies for inspection, repair, testing, and recertification in accordance with technical specifications. All valves were subsequently reinstalled and declared operable. No additional MSSV lift-setpoint verifications were performed.

The inspectors discussed with the system engineers, the rationale for not performing additional lift-setpoint verifications in Unit 2. The engineers informed the inspectors that the results of testing both at NWS Technologies and at Wyle Laboratories provided data that matched the as-found, out-of-tolerance setpoints. Differences between the NWS Technologies' setpoints and the Wyle Laboratories' setpoints correlated with the as-found conditions. Because of the confidence attained by the NWS Technologies' tests, the engineers did not consider in-plant testing, and the accompanying risks to plant conditions, warranted. The next normally scheduled testing of the MSSVs was to be

during the next refueling outage. Pending further NRC followup of test results during the next refueling outage, the confirmation of licensee corrective actions for MSSV setpoint deficiencies was identified as an inspection followup item (50-313, -368/9718-02).

Unit 1 "B" Feedwater Pump Trip

On October 21, 1997, a capacitor failure on the 5-volt power supply for the Unit 1 "B" feedwater control system resulted in a "B" feedwater pump trip and subsequent power reduction to 40 percent power. An auxiliary relay in the integrated control system, which was designed to actuate a main turbine runback, had previously experienced an undetected failure. As a result, the designed automatic power runback did not occur. Control room operators recognized the problem and manually reduced power to 40 percent. The licensee issued Condition Report 1-97-0296 to document the problem and to initiate a post-transient preliminary review and a root-cause evaluation.

The inspectors observed that the component failures that occurred, and that resulted in the "B" feedwater pump trip, were very important to safety, but not safety-related components of the feedwater control and integrated control systems. The inspectors observed licensee problem evaluations and discussions for the event. The inspectors noted that the licensee applied the same review process that would have been applied for problems associated with safety-related systems. The inspectors observed that the discussions and evaluations that occurred during a review board meeting for the post-transient preliminary review were detailed and comprehensive. The inspectors noted that the participants were very knowledgeable of the systems and components and well prepared for the discussions. As a result, the licensee was expeditiously able to determine the necessary corrective actions, accomplish the immediate corrective actions, and return the unit to full power operations.

c. Conclusions

The inspectors concluded that the licensee generally used condition reports very effectively for documenting conditions adverse to quality, determining sound root causes, addressing operability and reportability requirements, identifying generic concerns, and ensuring that plant staff implemented corrective actions in a timely manner. An unresolved item was identified for further licensee and NRC review of the consequences of failing to document emergency lighting deficiencies by means of condition reports.

The inspectors concluded that the IHEA group, the condition review group, and the corrective action review board, played key roles in the licensee's corrective action program implementation and were effectively accomplishing their review functions.

O7 Quality Assurance in Operations

O7.1 Operations Department Corrective Action

a. Inspection Scope (40500)

The inspectors interviewed the operations department managers of each unit, shift supervisors, control room operators, and auxiliary operators. The inspectors evaluated the operations department implementation of the corrective action program. The inspectors verified that the licensee appropriately identified significant issues and implemented timely corrective actions that achieved lasting results.

The inspectors accompanied auxiliary operators during tours, observed plant conditions, and reviewed and discussed with the operators the implementation of the condition reporting process for observed conditions.

b. Observations and Findings

The inspectors found good material condition in the control rooms and in other areas of the plant. Units 1 and 2 control rooms had a very low number of annunciator windows lit (approximately 5 per unit during various periods of the inspection). The few annunciator windows lit were associated with ongoing maintenance or testing, and did not represent long-standing deficiencies. The inspectors also found that both units had few operator work-arounds, approximately 12 for Unit 1 and 6 for Unit 2, during various periods of the inspection.

A senior reactor operator for each unit was assigned as a liaison between the operations department and the planning department. The operator maintained data bases to track control room deficiencies and operator work-arounds, and to ensure that operator priorities for deficient plant conditions were accurately conveyed to the planners and schedulers.

Operations staff at all levels demonstrated thorough knowledge of the corrective action program. A review of condition reports initiated during the 6 months prior to the inspection revealed that operators initiated a large number of condition reports. During interviews, operators displayed no reluctance to initiate condition reports. The inspectors learned, however, that operators were reluctant to use a low-level deficiency reporting system that was intended to be an adjunct to the condition reporting system. This system was intended to capture occurrences that did not have the safety or operational significance to justify a condition report, such as an operator nearly (but not actually) missing a step while performing a procedure. To help improve recognition and correction of human performance conditions, the Unit 2 operations department staff initiated the use

of a human performance information form to replace the low-level deficiency report. Although the human performance information form has been available for just a few months, the operations staff noted that operators have demonstrated greater willingness to use it. The Unit 1, operations manager also planned to implement the use of the human performance information form.

c. Conclusions

The inspectors concluded that operations department personnel had a very good understanding of the corrective action process and used the process to effectively identify and correct deficient plant conditions. The inspectors also concluded that control room deficiencies and operator work-arounds were well managed.

O7.2 Quality Assurance Audit Program Implementation

a. Inspection Scope (40500)

The inspectors reviewed the implementation of the quality assurance audit program to verify that required licensee review and audit functions were being performed. The inspectors reviewed the corrective action program quality assurance audit and discussed the audit results with licensee personnel.

b. Observations and Findings

On April 25, 1995, the NRC approved the relocation of the audit requirements previously contained in Section 6.0, "Administrative Controls," of the technical specifications to the quality assurance program description by means of Amendments 179 and 160 to the Units 1 and 2 technical specifications, respectively. Section 6.5.2.8, "Audits," of the technical specifications for each unit previously specified the performance of audits under the cognizance of the safety review committee and listed the minimum audit subject areas and frequencies.

The inspectors determined that "QA Manual Operations," Revision 19, Sections 1.3.9.1, "Safety Review Committee (SRC)," and 18.3.2, "Audit Schedule," contained the audit requirements that were relocated from the technical specifications. The inspectors noted that the audit requirements for the emergency plan, the security plan, and three audits of aspects of the fire protection program, were not specified in the QA Manual Operations, Section 18.3.2, audit schedule. The inspectors noted that the audits were specified in the respective plans and their corresponding audit requirements. However, the inspectors noted that the audits of the emergency and security plans were not required to be performed under the cognizance of the safety review committee.

The inspectors discussed the audit requirements for the emergency and security plans with licensee quality assurance department personnel. The licensee representative informed the inspectors that the omission of the requirement to perform those audits

under the cognizance of safety review committee was inadvertent. The licensee provided copies of safety review committee meeting minutes that documented the discussion of audits of the emergency and security plans that were performed in 1997. The licensee issued Condition Report C-97-0327 on November 7, 1997, to document and correct the inadvertent reduction of a requirement to perform the audits under the cognizance of the safety review committee. This failure constitutes a violation of minor significance and is being treated as a noncited violation, consistent with Section IV of the NRC Enforcement Policy (50-313, -368/9718-03).

The inspectors reviewed the audit schedule contained in Letter NQ-97-0264, "Third Quarter - QA Audit Schedule," dated October 1, 1997, and discussed the schedule with licensee personnel. The inspectors confirmed that audits were scheduled and performed as required by the quality assurance manual operations.

The inspectors reviewed Quality Assurance Department Audit Reports QAP-10-97-1997, "Corrective Action Audit," dated July 10, 1997; QAP-19-97, "Fire Protection and Loss Prevention," dated April 17, 1997; and QAP-19-1-97, "Fire Protection and Loss Prevention," dated August 8, 1997. The inspectors discussed the audit results with licensee personnel. The inspectors found that the audits were generally comprehensive and had good findings and observations. The inspectors noted that the fire protection program audits documented a minimal review of the implementation of emergency lighting requirements.

c. Conclusions

The inspectors concluded that quality assurance audit requirements were appropriately implemented. Good quality assurance audits with meaningful results were performed. A noncited violation was identified for the inadvertent program omission of the requirement to perform emergency and security plan audits under the cognizance of the safety review committee.

O7.3 Self-Assessment Activities

a. Inspection Scope (40500)

The inspectors reviewed plant and corporate self-assessments and quality assurance audits of operations' performance to assess the effectiveness of the licensee's assessments.

b. Observations and Findings

The inspectors reviewed Quality Assurance Audit Report QAP-8-96, "Plant Operations," dated December 4, 1996; a September 4, 1997, corporate operations assessment; and an operations self assessment covering the period July 7, 1996, to March 31, 1997. The quality assurance audit was adequate in scope and the report contained observations

that included recommendations for improved performance. It did not contain findings of unacceptable performance. The quality assurance staff tracked the operations staff action to address the recommendations for improved performance until the actions were complete. The quality assurance staff also indicated that if quality assurance had documented any findings, they would have initiated condition reports to ensure the operations staff took appropriate corrective action.

The corporate assessment of operations contained observations focused on aspects of performance, such as self-checking, tagging, training, place-keeping, and broader issues, such as alignment between units, shifts, departments, etc. The scope of the corporate assessment was focused on direct observations. Plant staff, members of other Entergy plant organizations, and members of other plant organizations outside Entergy performed the corporate assessment using a process of interviews, document reviews, and observation of shift activities. The findings were documented in condition reports, when appropriate, and the operations staff demonstrated that they had taken action on the findings, although they did not have a formal tracking mechanism.

The IHEA group performed an assessment of operations that integrated findings from various sources, such as third-party reports of the NRC and other organizations, trends identified through analysis of condition reports, and quality assurance quarterly reports and audits. Although the report contained information already found in other documents, it included a broad spectrum of performance assessments, including training, tagging, equipment testing deficiencies, infrequently performed tests and evolutions briefing effectiveness, and operability determinations. The in-house assessment provided performance trend information not contained in the corporate assessment. The IHEA group continued to monitor the identified trends to determine whether actions by plant staff improved performance.

The inspectors found that operators could discuss the programs for audit and assessment and were generally familiar with the information in the audits. Plant and operations management also were familiar with the information contained in the assessments, and with actions planned or in progress to address the findings and recommendations for improvement. The inspectors noted that, while the licensee did not use formalized tracking methods for findings not documented in condition reports, the plant staff demonstrated that they had initiated action to address the findings and recommendations in the assessments.

c. Conclusions

The program for evaluating operations' performance consisted of three different types of assessment that, taken together, provided very effective assessment.

O7.4 Safety Review Committee

a. Inspection Scope (40500)

The inspectors reviewed safety review committee activities to determine the effectiveness of the committee. No safety review committee meetings occurred during the inspection period for the inspectors to observe. The inspectors reviewed committee meeting minutes for three quarterly and four special 1997 meetings. The inspectors discussed with quality assurance, licensing, and system engineering personnel a sampling of the issues noted in the meeting minutes.

b. Observations and Findings

The functions, composition and minimum quorum of the safety review committee were specified in the QA Manual Operations, Section 1.3.9.1. The safety review committee was assigned the responsibility to review 10 CFR 50.59 safety evaluations, unreviewed safety questions, proposed changes to the technical specifications, violations, significant operating abnormalities, reportable events, unanticipated design or operational deficiencies affecting nuclear safety, plant safety committee activities, and audits of facility activities. The safety review committee was required to report to and advise the Vice President, Operations on the results of their review responsibilities.

The quality assurance manual operations requirements for the safety review committee were implemented by the "ANO Nuclear One Safety Review Committee Charter," Revision 19, dated January 14, 1997. The charter specified that the committee chairman was the Vice President, Operations.

The inspectors determined through review of the committee meeting minutes that the committee included and was attended by senior management personnel and industry consultants. The inspectors also determined through review and discussion of the meeting minutes that the committee was fulfilling its required review and audit responsibilities. Committee members discussed safety significant issues, such as a Unit 1 technical specification exigent change request regarding steam generator tube inspection surveillance requirements that resulted from the invalidation of a tube intergranular attack flaw sizing technique. The meeting minutes also documented briefings and discussions of various safety review and audit responsibilities. The meeting minutes documented recommendations made by the committee members and assignments to the staff.

c. Conclusions

Review of documentation indicated that the safety review committee was effectively performing the review and audit functions required by the quality assurance manual operations.

O7.5 Plant Safety Committee

a. Inspection Scope (40500)

Inspectors evaluated the effectiveness of the plant safety committee through meeting observations and review of committee meeting minutes.

b. Observations and Findings

The inspectors attended two plant safety committee meetings for each unit. The issues reviewed by the plant safety committee included design changes, temporary modifications, procedure changes, and changes to draft improved technical specifications. The plant safety committee members, in general, took appropriate actions to ensure proposed activities met regulatory requirements and ensured plant safety. For example, the plant safety committee tabled a request for approval of changes to drawings for the Unit 1 plant computer. The request identified discrepancies between the drawings and the as-built configuration. The presenter could not explain the basis for concluding the drawings were incorrect to the satisfaction of the plant safety committee, and the plant safety committee tabled the request pending resolution of their questions. The plant safety committee also tabled a request for approval to remove the H-2 auxiliary fuel handling bridge. Although the 10 CFR 50.59 determination form concluded that removing the fuel handling bridge required a change to technical specifications, the presenting engineer could not provide satisfactory discussion of the licensing aspects of the proposed change. As a result, the plant safety committee tabled the request pending discussion of the proposed change by the engineer with a licensing representative.

In general, the plant safety committee was prepared for discussions on the topics presented at the meetings. The majority of the items reviewed by the plant safety committee involved modifications, procedure changes, and safety evaluations. The committee focused on safety and compliance with requirements, and effectively addressed resolution of performance issues. The plant safety committee received a presentation of the Unit 2 operations concerns report on November 4, 1997, but the inspector noted that no other similar presentations were documented in the reviewed meeting minutes. The plant safety committee occasionally reviewed condition reports, but the reviewed meeting minutes did not document plant safety committee reviews of other forms of assessment, such as quality assurance audit reports or self-assessment reports. The inspectors concluded that the plant safety committee focused primarily on ensuring quality in emerging routine activities.

In one case, however, the plant safety committee did not identify the need for a safety evaluation. The inspectors observed that the plant safety committee reviewed a proposed change to the definition of "continuous fire watch" in the Final Safety Analysis Reports (FSARs) and in Procedure 1000.120, "ANO Fire Watch Program," Revision 8. The proposed change included a completed copy of Form 1000.131A, "10 CFR 50.59

Determination," Revision 3 PC-1. The form documented in Step 2, that the proposed change resulted in a statement in the FSARs being no longer true or accurate. Page 2 of Form 1000.131A concluded that the proposed change to the definition of a continuous fire watch in the FSARs did not require a 10 CFR 50.59 evaluation in accordance with Attachment 1, Item F.1 of Procedure 1000.131, "10 CFR 50.59 Review Program," Revision 3. Page 2 of Form 100.131A also stated: "Questions 1, 2 & 3. One statement will be added to the definition of continuous fire watch in the Unit 1 and Unit 2 SAR, Appendix 9D. The statement is: 'Continuous fire watches are not permitted to rove between fire areas.' This statement is for clarification and is in the conservative direction thus a 50.59 evaluation will not be performed. The OL nor test and experiments will not be affected. Insurance fire doors are not contained in the OL, SAR nor does it apply to any tests or experiments."

Through interviews, review of the FSARs and Procedure 1000.120, "ANO Fire Watch Program," the inspectors determined that the addition to the definition in the FSARs and the procedure provided additional restrictions to permitted activities for a continuous fire watch. The plant safety committee chairman stated that Procedure 1000.120 provided restrictions on continuous fire watch movement between areas through the reference to easy access. Procedure 1000.120 defined easy access as "no locked doors, step-off pads, or hazards that would otherwise impede the observation of each location within the specified fire zone at least once every 15 minutes. A specified zone may consist of more than one FHA [fire hazards analysis] fire zones within a single fire area provided easy access can be demonstrated. Continuous fire watches are not permitted to rove between areas." The plant safety committee chairman acknowledged that easy access existed between areas in the plant, that is, the plant contained adjacent areas not separated by locked doors, step-off pads, or hazards that impede observation.

The inspectors noted, however, that the added definition applied to areas, not zones, and added restrictions to the movement of a continuous fire watch not affected by the concept of easy access. The inspectors agreed that the added definition changed the FSARs and Procedure 1000.120 in a conservative way. The inspectors also noted that Procedure 1000.131, "10 CFR 50.59 Review Program," Attachment 1, Step F1, stated that minor clarifications that involve rearranging information currently in the FSARs to be more easily understood did not require a 10 CFR 50.59 evaluation. The inspectors observed that, although adding a definition to restrict continuous fire watch activities added conservatism, it changed the FSARs and Procedure 1000.120, it was not a rearranging of information already contained in the FSARs or procedure, and the inspectors did not consider the change trivial. The licensee noted the inspectors' conclusion, but did not agree that, in this case, a safety evaluation was required. The licensee's failure to include a written safety evaluation for a change to a procedure as described in the FSARs was a violation of 10 CFR 50.59 (50-313, -368/9718-04).

c. Conclusions

The plant safety committee was generally effective in assuring safety for emerging activities, such as modifications and procedure changes. However, a 10 CFR 50.59 violation was identified for the failure to perform a written safety evaluation for a plant safety committee-approved change to a procedure definition of a "continuous fire watch," as described in the FSARs.

O7.6 Industry Operating Experience

a. Inspection Scope (40500)

The inspectors reviewed the licensee's industry events analysis program that the licensee used for evaluating and tracking industry operating events originating from sources external to Arkansas Nuclear One. This program was reviewed to determine its effectiveness in assessing, documenting, and informing appropriate plant personnel of significant plant events in an effort to prevent their occurrence at the plant.

b. Observations and Findings

The inspectors determined that Procedure 1010.008, "Industry Event Analysis Program," Revision 9, defined the licensee's program for evaluating and tracking industry operating events originating from sources external to Arkansas Nuclear One. The licensee's program evaluated industry operating experience documents, including:

- NRC information notices
- NRC bulletins
- NRC generic letters
- NRC administrative letters
- INPO significant operating experience reports
- INPO significant event reports
- Vendor bulletins
- 10 CFRt 21 notifications

The inspectors reviewed the licensee's completed evaluations of the following documents and determined that all six items had been properly evaluated and appropriately dispositioned.

- NRC Information Notice 95-36, Supplement 1, "Potential Problems with Post-Fire Emergency Lighting"

- INPO Significant Event Report 1-97, "Nonconservative Operation During Isolation of a Reactor Recirculation Pump Seal Leak"

- INPO Operating Experience 8264, "2A Emergency Diesel Generator Failure to Start Due to a Failure of Train "B" Starting Air Control Valve"

- INPO Operating Experience 8221, "Pipe Deformation Following Freeze Seal Application"

- INPO Operating Experience 8141, "Unit Trip Due to Failed Bolt on Feed Regulating Valve Fisher Positioner"

- Fisher Information Notice 93-01, Supplement 1, "Possible Butterfly Valve Woodruff Key Failures and Contamination of High Strength Key Inventory With Low Strength Keys"

The inspectors also reviewed licensee's actions for NRC Generic Letter 96-01, "Testing of Safety-Related Logic Circuits." The inspectors found that appropriate initial corrective actions had been implemented for Unit 2. However, as of November 7, 1997, the licensee had not completed the evaluations for Unit 1 and the review was being tracked in the licensee's program.

The inspectors reviewed the licensee's "Industry Events Plant Impact Evaluation (PIE) Summary Report," dated October 13, 1997, and "Industry Events Analysis - Screening Summary," dated October 13, 1997. The inspectors found that from January 1 to October 2 ', 1997, the industry events analysis program had identified, and was tracking, 336 new operating experience documents. The inspectors determined that the summary documents provided appropriate program information.

The inspectors reviewed the licensee's actions for an operating experience feedback related to a recent loss of shutdown cooling at another Entergy facility, and follow-up to a 10 CFR 21 report of deficiencies in Potter-Brumfeld relays and a 10 CFR 21 report of nonconservative assumptions in a Babcock and Wilcox loss-of-coolant accident analysis. The IHEA group reviewed the loss of shutdown cooling event and appropriately identified that ineffective use of the time-to-boil curves at that facility significantly contributed to failure to prevent boiling in the core. The IHEA appropriately concluded that operators could benefit from the lessons learned, and submitted a training request for operations pertaining to use of the time to boil curves.

With respect to the 10 CFR 21 reports concerning contaminated or excessive lubrication in Potter-Brumfeld relays and nonconservative assumptions of initial conditions for emergency core cooling system evaluations of large break loss-of-coolant accident analysis, in both cases, the licensee reported the conditions to the NRC, generated corresponding condition reports that appropriately characterized the concerns, and took appropriate corrective actions in accordance with their corrective action program. The technical adequacy of the licensee's response to those concerns was previously addressed in NRC inspection reports. The inspectors determined that plant staff properly implemented the corrective action program for these concerns.

c. Conclusions

The inspectors concluded that reviews and corrective actions for operating experience were being controlled and that the industry events analysis program was being managed appropriately. The inspectors concluded that the licensee effectively incorporated industry experience into the corrective action program.

II. Maintenance

M2 Maintenance and Material Condition of Facilities and Equipment

M2.1 Condition Reports

a. Inspection Scope (40500)

The inspectors reviewed 29 condition reports to determine the licensee's effectiveness of:

(1) Initial identification and characterization of problems

(2) Root-cause analysis

(3) Implementation of corrective actions, including evaluation of repetitive conditions

(4) Expansion of the scope of corrective actions to include applicable related systems, equipment, procedures, and personnel actions

The inspectors also discussed several of the condition reports with licensee personnel.

b. Observations and Findings

The inspectors found that the condition reports were being appropriately utilized for problem identification and implementation of repair and replacement of plant equipment. The inspectors found no examples of condition reports that were improperly used to modify the plant design nor examples of major repetitive maintenance. The inspectors determined that the licensee had implemented appropriate corrective actions for the condition reports reviewed.

c. Conclusions

The inspectors concluded that condition reports were being adequately dispositioned.

M2.2 Maintenance Job Orders

a. Inspection Scope (40500)

The inspectors reviewed 11 job orders involving maintenance activities to determine if repetitive problems existed and to determine if they were being used to improperly modify the plant design. The inspectors discussed several of the work orders with licensee personnel.

b. Observations and Findings

The inspectors found that the job orders were used appropriately for the repair and replacement of plant equipment. The inspectors found no examples where the job orders were improperly used to modify the plant design. In addition, no examples of major repetitive maintenance were identified.

c. Conclusions

The inspectors concluded that job orders were appropriately used for the repair and replacement of plant equipment.

M2.3 Maintenance Backlog

a. Inspection Scope (40500)

The inspectors reviewed the maintenance backlog of job orders to determine the backlog size, the trend, how the backlog was tracked and managed, and how priorities were determined. The inspectors also discussed the backlog with applicable maintenance personnel.

b. Observations and Findings

In accordance with Procedure 1000.024, "Control of Maintenance," Revision 43 PC-3, the licensee's job request/order priority system distinguished the action level required by plant organizations in initiating, working, and closing a job order, as noted below:

Priority 1: Immediate action is required and should be maintained on a 24-hour basis until the item is under control.

Priority 2: Action is to be assigned and coordinated on a priority basis to meet imposed time restraints.

Priority 3: Action is to be assigned and coordinated on a routine basis.

Priority 4: Action is to be assigned and coordinated on a fill-in basis.

Priority 5: This priority shall be assigned to those activities that require the plant to be in Mode 2, 3, 4, 5, or 6 (outage condition).

From November 1996 to October 1997, the licensee's backlog of Priority 1-4 nonoutage corrective maintenance job orders had increased approximately 21 percent for Unit 1 and 41 percent for Unit 2. In November 1996, the Priority 1-4 nonoutage corrective maintenance job order backlogs consisted of 451 job orders for Unit 1 and 216 job orders for Unit 2. By October 1997, the backlog of Priority 1-4 nonoutage corrective maintenance job orders had increased to 544 job orders for Unit 1 and 305 job orders for Unit 2. The licensee's goals for the Priority 1-4 nonoutage corrective maintenance job orders was 450 job orders for Unit 1 and 275 job orders for Unit 2. The licensee's representatives stated that the increase in the backlogs for the corrective maintenance job orders for both units appeared to be the result of additional training provided to licensee personnel on the use of the corrective action process to address problems noted in the plants. The inspectors reviewed selected job orders and noted that the licensee's tracking system was effectively tracking the backlog of corrective maintenance job orders.

c. Conclusions

The inspectors concluded that the licensee's backlog of maintenance job orders was being appropriately tracked.

M2.4 Plant Walkdown

a. Inspection Scope (40500)

The inspectors observed the material condition of the plant and determined the effectiveness of licensee actions in maintaining material condition.

b. Observations and Findings

During tours of various areas of the plants in the reactor auxiliary buildings and turbine buildings, the inspectors found that the structures, systems, and components observed were visually free of corrosion. The inspectors observed some minor oil and water leaks but the external condition of the affected structures, systems, and components appeared to be well maintained.

The inspectors performed a visual inspection of emergency lighting in the Unit 2 control element drive mechanism control system room as stated in Section O1.1 of this inspection report. The room contained the remote shutdown panel, the anticipated transient without a scram panel, and several control element drive mechanism switchgear panels. The inspectors observed a "Presto" portable lift (wheels locked), two chairs with rollers, a standard chair (no rollers), a desk, two file cabinets, and a computer

monitor on top of a cabinet in close proximity to the above-mentioned panels. The lift and the chairs appeared to have been left where they were last used. There was no ongoing work or licensee personnel in the room at the time. Except for the portable lift, none of the other observed equipment appeared to be restrained to prevent impacting the plant panels during a seismic event.

The inspectors informed licensee personnel of the apparent lower level of housekeeping in the room and inquired about the potential impact on plant equipment during a seismic event. The licensee personnel provided to the inspectors a copy of Memorandum ANO-96-00545, "Interim Guidance for the Placement of Items (Loose Parts) Around Safety Equipment," dated August 7, 1996. The licensee personnel informed the inspectors that a plant procedure had not yet been issued to replace the interim guidance. Design engineering provided, by means of the memorandum, interim guidelines for the storage or placing of loose items in the vicinity of safety-related equipment. The licensee issued Condition Report 2-97-0583 to determine if the identified condition violated the guidelines and to correct the identified condition. As immediate action, the licensee moved a chair and a storage cabinet to another location in the room that was not around safety-related equipment. As part of the actions for the condition report, the licensee evaluated the past operability of the panels in the room based on the observed housekeeping in the room by means of Engineering Request 975050. The engineering evaluation determined that none of the observed conditions would have resulted in an inoperable condition during and after a seismic event. Although the safety significance of the observed condition was minimal, the inspectors found the housekeeping in the room to be poor.

c. Conclusions

The external condition of the observed structures, systems, and components appeared to be good. While housekeeping in both units was generally good, housekeeping in the Unit 2 control element drive mechanism control system room was poor.

M7 Quality Assurance in Maintenance Activities

M7.1 Review of Self-Assessments Activities

a. Inspection Scope (40500)

The inspectors reviewed selected assessments and audits to evaluate the effectiveness of the licensee's self-assessment capability. The inspectors discussed the findings with licensee personnel to determine if the corrective actions and recommendations that resulted from the assessments and audits were adequate and were completed in a timely manner.

b. Observations and Findings

The inspectors found that the majority of the self assessments and audits were thorough and critical of maintenance department processes. Some of the areas covered by the self assessments and audits included training, work control, tool control, housekeeping and material condition, preventive maintenance, and maintenance procedures and documentation.

The inspectors sampled some of the recommendations from recent self assessments and audits of the maintenance department and determined the following:

- Corrective action responsibilities had been formally assigned for the Arkansas Nuclear One Maintenance Department Corporate Assessment (File 97.17). The inspectors noted that the statuses of the corrective actions for the corporate assessment's 12 recommendations were tracked in a corporate open item list titled, "Assessment Recommendations and Dispositions." The corporate open item list (SMT No. 32) dated November 5, 1997, showed 11 of 12 action items past the assigned due dates, without any disposition actions identified.

- Corrective action responsibilities had not been formally assigned for the maintenance department Internal "Maintenance Assessment Report," dated August 1997. Licensee representatives informed the inspectors, that while the corrective action responsibility for weaknesses and recommendations identified during the maintenance department's internal assessments was not formally assigned or tracked, maintenance department managers were assigned the responsibility to ensure corrective actions for these items were implemented as required.

- Corrective action responsibilities had been assigned through condition reports for the results of Quality Assurance Audit Report QAP-15-97, "Measuring and Test Equipment." The status of the corrective actions for the open items were tracked by the IHEA group and in a quality assurance informal open item list titled, "1997 Audit/Surveillance Open Action Item List." The quality assurance open item list dated September 4, 1997, showed no Quality Assurance Audit Report QAP-15-97 open items past the assigned due dates.

The inspectors discussed corporate assessment overdue management open items with various licensee representatives. Licensee representatives noted that while they were working these management open items, which were past the identified due dates, higher priority work was preventing closure of these items. A review of the management open items for the corporate assessment did not identify any item that appeared to represent a plant operational concern.

c. Conclusions

The licensee assessments were effective in identifying good recommendations for maintenance. However, the licensee did not appear to be aggressively following up on some recent assessment findings.

M7.2 Management Observation Program

a. Inspection Scope (40500)

The inspectors reviewed Procedure 1025.034, "Maintenance Activity Performance Assessment," Revision 2, issued to identify the requirements and the direction and controls for periodic assessment of maintenance activities. This review assessed the program's contribution to the licensee's corrective action program.

The inspectors interviewed supervisors and other personnel in the mechanical and electrical maintenance departments to determine how the licensee's management field observation program was being implemented.

b. Observations and Findings

Section 4.0 of Procedure 1025.034 provided the following definitions:

Field Observations - A direct, on-the-job, visual observation of a maintenance activity.

Maintenance Assessment - The performance of a field observation, review of the findings with the responsible maintenance manager and arriving at key conclusions from the observation and discussions with responsible managers.

Section 5.2 of Procedure 1025.034 identified that the maintenance manager had responsibilities and authority for establishing the frequency of assessments and for collecting, cataloging, and trending the data from the assessments.

Section 6.0 of Procedure 1025.034 noted that:

- Managers, superintendents, and supervisors would be expected to perform field observations of scheduled maintenance work activities. The input from these observations and the reviews with the responsible work group superintendent or maintenance manager should provide a tool that may be used to assess the performance of the maintenance activity. Each assessment is catalogued by key parameters, and the parameters are trended collectively with other previous assessments.

- Normally each discipline would conduct one assessment per month. Changes to this frequency will be directed by the maintenance or plant manager, unless due to circumstances such as an outage, when the schedule assessments are not performed.

- The assessments should be completed on Form 1025.034A.

The inspectors reviewed the maintenance department master file of completed field observation forms titled, "Performance Assessment." On November 5, 1997, the maintenance department master file of field observation forms contained the following number of completed performance assessment forms per year per unit:

- 1995 Unit 1 - 6 assessments
  Unit 2 - 7 assessments

- 1996 Unit 1 - 68 assessments
  Unit 2 - 2 assessments

- 1997 Unit 1 - 12 assessments
  Unit 2 - 8 assessments

During discussions with maintenance department managers and other maintenance personnel, and the inspectors' review of records, the inspectors noted that:

- There did not appear to be a formal process for scheduling assessments, or collecting, cataloging and trending the data from the assessments.

- There was no one assigned the responsibility for trending observation results and providing department heads with a periodic summary of the performance assessment results.

In reply to the inspectors' observations noted above, the unit maintenance managers noted that:

- Procedure 1025.034 was not a safety-related procedure.

- The unit maintenance managers informally directed scheduling of assessments, reviewed, collected, cataloged, and trended the data documented on the performance assessments (Form 1025.034A).

- The completed performance assessments, on Form 1025.034A, were informally dispositioned by the unit maintenance managers.

- Safety-related deficiencies observed during the management field observations were still required to be identified and resolved by means of condition reports.

c. Conclusions

The inspectors concluded that a process for management field observation of maintenance activities had been established, but was not being aggressively implemented.

V. Management Meetings

X1 Exit Meeting Summary

The inspectors presented the inspection results to members of licensee management at the conclusion of the inspection on November 7, 1997. The licensee personnel acknowledged the findings, but stated that they disagreed with the finding that a safety evaluation had to be documented for a change to the definition of a "continuous fire watch" as defined in the FSARs and the fire watch program procedure.

The inspectors asked licensee management and staff whether any material examined during the inspection contained proprietary information. No proprietary information was identified.

ATTACHMENT

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

B. Allen, Maintenance Manager, Unit 2
M. Cooper, Licensing Specialist
P. Dietrich, Maintenance Manager, Unit 1
R. Edington, General Manager
R. Espolt, Manager, Events Analysis
D. Fowler, Supervisor, Quality Assurance
R. Fuller, Operations Manager, Unit 1
R. Hutchinson, Vice President, Nuclear Operations
D. Mims, Director, Licensing
D. Nilius, Senior System Engineer, Unit 2
W. Perks, Chairman, Plant Safety Committee
M. Ruder, Lead, In-House Events Analysis
T. Russell, Operations Manager, Unit 2
M. Smith, Manager, Engineering Programs
C. Zimmerman, Plant Manager, Unit 1

NRC

J. Melfi, Acting Senior Resident Inspector

INSPECTION PROCEDURES USED

40500	Effectiveness of Licensee Controls in Identifying, Resolving, and Preventing Problems

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-313, -368/9718-01	URI	Consequences for failing to write condition reports for emergency lighting deficiencies, Section O1.1
50-313, -368/9718-02	IFI	Future testing to confirm corrective actions for main steam safety valve setpoint out-of-tolerance conditions, Section O1.1
50-313, -368/9718-03	NCV	Inadvertent omission of emergency and security plan audits under cognizance of safety review committee, Section O7.2

50-313, -368/9718-04	VIO	Failure to document 10 CFR 50.59 safety evaluation for change to "continuous fire watch" definition, Section O7.5

Closed

50-313, -368/9718-03	NCV	Inadvertent omission of emergency and security plan audits under cognizance of safety review committee, Section O7.2

PROCEDURES REVIEWED

Procedure No.	Title/Revision
1000.002	Plant Safety Committee Operations, Revision 22
1000.104	Condition Reporting and Corrective Actions, Revision 13 PC-1
1000.120	ANO Fire Watch Program, Revision 8
1000.131	10 CFR 50.59 Review Program, Revision 3 PC-1
1000.024	Control of Maintenance, Revision 43 PC-3
1010.008	Industry Events Analysis Program, Revision 9
1015.037	Post Transient Review, Revision 0
1025.003	Conduct of Maintenance, Revision 43
1025.034	Maintenance Activity Performance Assessment, Revision 2
2306.024	Unit 2 Relief Valve Setpoint Testing, Revision 3
2411.091	EFW Pump Turbine Internal Inspection, Revision 4

CONDITION REPORTS REVIEWED

C-96-0122	1-97-0172	2-97-0181	2-97-0357
C-97-0193	1-97-0174	2-97-0186	2-97-0385
C-97-0201	1-97-0181	2-97-0232	2-97-0387
C-97-0313	1-97-0206	2-97-0234	2-97-0407
C-97-0327	1-97-0214	2-97-0237	2-97-0413
C-97-0328	1-97-0243	2-97-0275	2-97-0419
1-97-0114	1-97-0249	2-97-0297	2-97-0423
1-97-0116	1-97-0296	2-97-0298	2-97-0499
1-97-0123	2-96-0392	2-97-0300	2-97-0583
1-97-0143	2-97-0152	2-97-0310	
1-97-0150	2-97-0160		

Maintenance Work Order Packages

00966021	Obtain Information on 120 VAC Distribution Panel RS-1
00964852	Replace Heads on DG1 Starting Air Compressor C-4A-1
00963666	Anchor Emergency Diesel Generator Fuel Oil Filter
00963653	Repair LPSI Check Valve 2SI-14D
00962506	Reroute Tubing Downstream of DG2, FO-8430B
00951996	Inspect Discharge Check Valve 2EFW-7B
00950585	Remove and Replace EFW Relief Valve 2PSV-0706
00950271	Repair EFW Relief Valve 2PSV-0706
00944488	Perform Internal Inspection of Turbine EFW Pump 2P-7A Driver Assembly
00922338	Replace Overload Relay Heater Elements in 480V Motor Control Center
00914000	Replace Bushings in Circuit Breaker 2A-102

Audits

Audit Number	Title
QAP-21-97	"Quality Assurance Audit - QAP-21-97, ASME Section XI Repair/Replacement," dated September 25, 1997
QAP-15-97	"Quality Assurance Audit - QAP-15-97, Measuring and Test Equipment," dated June 10, 1997
QAP-11-96	"Quality Assurance Audit QAP-11-96, Corrective Maintenance," dated July 15, 1996
QAP-10-97	"1997 Corrective Action Audit," dated July 10, 1997
QAP-19-97	"Fire Protection and Loss Prevention," dated April 17, 1997
QAP-19-1-97	"Fire Protection and Loss Prevention," dated August 8, 1997
QAP-8-96	"Plant Operations," dated December 4, 1996

LIST OF PLANT SAFETY MEETING MINUTES REVIEWED

Meeting Date	Meeting No.
September 30, 1997	PSC-97-143
September 23, 1997	PSC-97-139
September 18, 1997	PSC-97-137
September 16, 1997	PSC-97-136
September 9, 1997	PSC-97-135
September 9, 1997	PSC-97-134
September 7, 1997	PSC-97-133
September 4, 1997	PSC-97-132
September 2, 1997	PSC-97-131
August 26, 1997	PSC-97-130
August 26, 1997	PSC-97-129
August 24, 1997	PSC-97-128
August 22, 1997	PSC-97-127
August 21, 1997	PSC-97-126
August 21, 1997	PSC-97-125
August 18, 1997	PSC-97-124
August 14, 1997	PSC-97-123
August 14, 1997	PSC-97-122
August 11, 1997	PSC-97-121
August 7, 1997	PSC-97-120
August 5, 1997	PSC-97-119
August 4, 1997	PSC-97-118

Other Documents

Licensee Event Report 50-368/97-005-00, Main Steam Safety Valves As-Found Lift Values Did Not Meet Technical Specification Requirements

Root Cause Evaluation Report for CR-1-97-297, Untested Configuration of ACW Isolation Valves, November 5, 1997

Root Cause Evaluation Report for CR-2-97-0152, Unit Two Main Steam Safety Valve Lift Settings Out of Tolerance, June 23, 1997

ANO "QA Manual Operations," Revision 19

ANO letter NQ-97-0264, "Third Quarter - QA Audit Schedule," dated October 1, 1997

ANO Nuclear One Safety Review Committee Charter," Revision 19, dated January 14, 1997

Safety Review Committee Meeting Minutes Numbers SRCM-97-01, SRCM 97-02, SRCM 97-03, SRCM 97-04, SRCM 97-05, SRCM 97-06, SRCM 97-07, and SRCM 97-08

NRC Information Notice 95-36, Supplement 1, "Potential Problems with Post-Fire Emergency Lighting"

INPO Significant Event Report 1-97, "Nonconservative Operation During Isolation of a Reactor Recirculation Pump Seal Leak"

INPO Operating Experience 8264, "2A Emergency Diesel Generator Failure to Start Due to A Failure of Train "B" Starting Air Control Valve"

INPO Operating Experience 8221, "Pipe Deformation Following Freeze Seal Application"

INPO Operating Experience 8141, "Unit Trip Due To Failed Bolt On Feed Regulating Valve Fisher Positioner"

Fisher Information Notice 93-01, Supplement 1, "Possible Butterfly Valve Woodruff Key Failures and Contamination of High Strength Key Inventory With Low Strength Keys"

NRC Generic Letter 96-01, "Testing of Safety-Related Logic Circuits."

"Industry Events Plant Impact Evaluation (PIE) Summary Report," dated October 13, 1997 and "Industry Events Analysis - Screening Summary," dated October 13, 1997

Memorandum ANO-96-00545, "Interim Guidance for the Placement of Items (Loose Parts) Around Safety Equipment," dated August 7, 1996

Engineering Request 975050, "Evaluate Past Operability Concern for Cubicle 2C75 and 2C80 per CR-2-97-0583," dated November 11, 1997

Corporate Open Items List SMT 32, "Assessment Recommendations and Dispositions," dated November 5, 1997

Maintenance Department Internal Assessment, "Maintenance Assessment Report," dated August 1997

Mid-SALP Self Assessment, "Maintenance and Surveillance," July 7, 1996 to March 10, 1997"

File 97.17, "Arkansas Nuclear One Maintenance Department Assessment," April 21, 1997
Assessment LIC-97-018, "Assessment of ANO Regulatory Performance," March 13, 1997

Corporate Arkansas Nuclear One Operations Assessment, dated September 4, 1997

ANO Operations Self-assessment for the period July 7, 1996 to March 31, 1997