UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

July 21, 2003

Craig G. Anderson, Vice President,
Operations
Arkansas Nuclear One
Entergy Operations, Inc.
1448 S.R. 333
Russellville, Arkansas 72801-0967

SUBJECT: ARKANSAS NUCLEAR ONE - NRC INTEGRATED INSPECTION REPORT
05000313/2003003, 05000368/2003003, and 07200013/2003003

Dear Mr. Anderson:

On June 21, 2003, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Arkansas Nuclear One, Units 1 and 2, facility. The enclosed integrated inspection report documents the inspection findings, which were discussed on July 2, 2003, with you and other members of your staff.

The inspection examined activities conducted under your licenses as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your licenses. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, the NRC has identified two findings which are presently characterized as unresolved, requiring additional NRC review. The first one involves the failure to properly document, or take corrective actions for a number of observed anomalies and performance issues regarding the Unit 2 safety-related Battery 2D12, which has resulted in a degraded condition of the battery. This is not an immediate safety concern because your staff determined the battery would perform its intended safety function and they are monitoring any ongoing degradation. The second involves a finding related to the adequacy of the means established for notification of members of the populace in the plume exposure emergency planning zone. There is not an immediate safety concern with this issue because you promptly identified the populace that may not have been offered notification equipment and took steps to offer this equipment to them. Additional review is required by the NRC staff to assess the significance of these findings. Additionally, one licensee-identified violation which was determined to be of very low safety significance is listed in Section 4OA7 of this report. If you contest any NCV in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011-4005; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at Arkansas Nuclear One, Units 1 and 2, facility.

Since the terrorist attacks on September 11, 2001, NRC has issued five Orders and several

threat advisories to licensees of commercial power reactors to strengthen licensee capabilities, improve security force readiness, and enhance controls over access authorization. In addition to applicable baseline inspections, the NRC issued Temporary Instruction 2515/148, "Inspection of Nuclear Reactor Safeguards Interim Compensatory Measures," and its subsequent revision, to audit and inspect licensee implementation of the interim compensatory measures required by order. Phase 1 of TI 2515/148 was completed at all commercial power nuclear power plants during Calender Year '02 and the remaining inspection activities for Arkansas Nuclear One were completed on January 10, 2003. The NRC will continue to monitor overall safeguards and security controls at Arkansas Nuclear One.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Linda Joy Smith, Chief
Project Branch D
Division of Reactor Projects

Dockets: 50-313
50-368
Licenses: DPR-51
NPF-6

Enclosure: Inspection Report 05000313/2003003, 05000368/2003003, and 07200013/2003003
w/Attachment: Supplemental Information

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ADAMS: √ Yes ☐ No Initials: __LJS_ **DMB (IE35)**
√ Publicly Available ☐ Non-Publicly Available ☐ Sensitive √ Non-Sensitive

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Dockets:	50-313, 50-368, 72-13
Licenses:	DPR-51, NPF-6
Report :	05000313/2003003, 05000368/2003003, and 07200013/2003003
Licensee:	Entergy Operations, Inc.
Facility:	Arkansas Nuclear One, Units 1 and 2
Location:	Junction of Hwy. 64W and Hwy. 333 South Russellville, Arkansas
Dates:	March 23 through June 21, 2003
Inspectors:	K. Weaver, Acting Senior Resident Inspector D. Carter, Health Physicist J. Clark, Senior Project Engineer E. Crowe, Acting Resident Inspector R. Lantz, Senior Emergency Preparedness Inspector G. Morell, Health Physicist
Approved By:	Linda Joy Smith, Chief, Projects Branch D Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000313/2003003, 05000368/2003003, and 07200013/2003-03; 3/23/03-6/21/03; Arkansas Nuclear One, Units 1 and 2, Equipment Alignment, Alert and Notification System Testing.

This report covered a 3-month period of inspection by resident inspectors, a senior project engineer, two health physicists, and a senior emergency preparedness inspector. One unresolved item which involves a violation with potential safety significance undetermined and one unresolved item with potential significance greater than Green were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process." Findings for which the significance determination process does not apply may be Green or be assigned a severity level after NRC management's review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. NRC-Identified and Self Revealing Findings

Cornerstone: Mitigating Systems

- TBD. The inspectors identified that Unit 2 Battery 2D12 was degraded. The licensee had failed to properly document, or take corrective actions for, a number of observed anomalies and performance issues regarding Battery 2D12. In violation of 10 CFR Part 50, Appendix B, Criterion XVI, these deficiencies had not been included in the licensee's corrective action system for evaluation and correction.

  While Battery 2D12 was determined to be able to provide its design safety function, this finding is greater than minor because these conditions could be reasonably considered significant if left uncorrected because they represented ongoing deterioration. The safety significance of this violation is unresolved pending evaluation of the performance of Battery 2D12 from now until it is replaced. This issue had crosscutting aspects of problem identification and resolution (Sections 1R04 and 4OA2).

Cornerstone: Emergency Preparedness

- TBD. The inspectors identified a finding related to the adequacy of the means established for notification of members of the populace in the plume exposure emergency planning zone.

  Because the finding affected the reactor safety emergency preparedness cornerstone objective, the finding is greater than minor. The finding also was determined to have a potential safety significance greater than very low significance because of the potential degradation of the risk significant planning standard 10 CFR 50.47(b)(5), in that less than 100 percent of the population in the emergency planning zone would be alerted as required by the alert

notification system design. This is an unresolved item because additional information is required to determine both the compliance aspects and significance of the finding.

One element of the unresolved item is the adequacy of the licensee's audit program to be able to identify poor performance or adverse trends by the office of Nuclear Planning and Response Programs implementation of the radio program. Lack of an adequate audit program would result in a lack of identification of problems, which would allow a degraded condition to continue to worsen. The licensee did not conduct audits of the Nuclear Planning and Response Programs, which reduced their opportunity to identify any potential concern in implementation of that program (Sections 1EP2 and 4OA2).

REPORT DETAILS

Summary of Plant Status

Unit 1 began the inspection period at approximately 100 percent power. From April 15-17, 2003, Unit 1 operators reduced power to approximately 97.5 percent on several occasions to allow for main steam safety valve testing. On May 7, 2003, Unit 1 operators reduced power to approximately 65 percent to facilitate emergency maintenance at the Pleasant Hill substation, which required isolation of a 500 kV transmission line. Unit 1 operators returned the unit to 100 percent power on May 9, 2003. The unit remained at or near 100 percent power throughout the remainder of this inspection period.

Unit 2 began the inspection period at approximately 100 percent power and remained at or near 100 percent power throughout the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

a. Inspection Scope

On May 13-14, 2003, the inspectors verified the site's response to a loss of the Pleasant Hill transmission line during severe thunderstorms in the area. The inspectors verified that activities required by Technical Specification 3.8.1 were taken. The inspectors reviewed Procedure 2203.008, "Natural Emergencies," Revision 9, to determine all applicable requirements for the station's offsite electrical distribution system and verified these measures were in place to protect plant equipment.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

.1 Partial System Walkdown (71111.04)

a. Inspection Scope

The inspectors performed a partial system walkdown of the Unit 2 125 Vdc distribution system on April 29, 2003. The inspectors verified proper component configuration and operation in accordance with design drawings; Procedure 2107.004, "DC Electrical System Operation," Revision 20; and the Updated Final Safety Analysis Report (UFSAR). The inspectors also examined component material condition.

The inspectors performed a partial system walkdown of the Unit 1 125 Vdc distribution system on May 15, 2003. The inspectors verified proper component configuration and operation in accordance with design drawings; Procedure 2107.004, "DC Electrical System Operation," Revision 20; and the UFSAR. The inspectors also examined component material condition.

The inspectors performed a partial system walkdown of Unit 2 Emergency Diesel Generator 2K4A, on June 4, 2003, while the Unit 2 Emergency Diesel Generator 2K4B was being surveillance tested. The inspectors verified proper component alignment and operation in accordance with Procedure 2104.036, "Emergency Diesel Generator System Operation," Revision 46, and system piping and instrumentation diagrams to verify that the system was in a proper standby lineup. The inspectors also examined component material condition.

The inspectors performed a partial system walkdown of the alternate ac emergency diesel generator on June 5, 2003. The inspectors verified proper component alignment and operation in accordance with Procedure 2104.036, "Emergency Diesel Generator System Operation," Revision 46, and system piping and instrumentation diagrams to verify that the system was in a proper standby lineup. The inspectors also examined component material condition.

The inspectors performed a partial system walkdown of Unit 1 Decay Heat Removal Pump 2P-34B while Unit 1 Decay Heat Removal Pump 2P-34A was taken out of service for a system outage on June 19, 2003. The inspectors verified proper component alignment and operation in accordance with Procedure 1104.004, "Decay Heat Removal Operating Procedure," Revision 70, and system piping and instrumentation diagrams to verify that the system was in a proper standby lineup. The inspectors also examined component material condition.

b. Findings

No findings of significance were identified.

.2 Complete System Walkdown of Battery 2D12 (71111.04S)

a. Inspection Scope

The inspectors performed a complete walkdown of Unit 2 125 Vdc Battery 2D12 and supporting equipment on April 29, 2003. The inspectors verified proper component configuration and operation in accordance with design drawings; Procedure 2107.004, "DC Electrical System Operation," Revision 20; and the UFSAR. The inspectors also reviewed recent surveillance and maintenance tests associated with this safety-related battery. The inspectors reviewed the corrective action system for documentation of problems associated with Battery 2D12 over the previous year. The inspectors also examined material condition of the individual cells, ventilation, battery racks, and equipment separation.

b. Findings

Introduction

The inspectors identified that Unit 2 Battery 2D12 was degraded. The licensee had failed to properly document or take corrective actions for a number of observed anomalies and performance issues regarding Battery 2D12. In violation of 10 CFR Part 50, Appendix B, Criterion XVI, these deficiencies had not been included in the licensee's corrective action system for evaluation and correction. While Battery 2D12 was determined to be able to provide its design safety function, these conditions could be reasonably considered to be significant because, if left uncorrected, they represented ongoing deterioration. The safety significance of this violation is unresolved pending evaluation of the performance of Battery 2D12 from now until it is replaced. This issue had crosscutting aspects of problem identification and resolution.

Description

During a visual inspection and surveillance test review on April 29, 2003, inspectors noted numerous unusual physical aspects of the battery cells and racks as well as battery performance issues. These included:

- Positive plates on many of the cells were flaking, or crumbling, from the tops and sides of the plates. In some cases, strips of material over an inch long had fallen to the bottom of the cell jar. The inspectors were concerned that this represented abnormal deterioration of the positive plates and also represented a potential shorting mechanism due to conductive debris collecting at the bottom of the cell jars.

- Battery posts and intercell connections exhibited several forms of discoloration. Besides various brown or caramel colored deposits, which appeared to be old corrosion-resistant coating, posts also had some reddish coloring and portions that appeared dark blue to black. On many of the posts, the discoloration was over one half of a post face and sometimes extended to the connector. The inspectors were concerned that this represented corrosion which could deteriorate the connections or cause overheating during emergency use of the battery.

- White crystal or powder was noted on many of the cell covers. The inspectors were concerned that ineffective housekeeping could lead to corrosion and deterioration of the battery.

- Battery rack bolting arrangements were not consistent from one section of the bank to another and full thread engagement was not present at some connections. Visible corrosion, in the form of whitish powder, was present at a number of rack fasteners. The inspectors were concerned that this could represent deterioration or lack of stability for seismic qualification of the battery.

- Battery maintenance tests had errors and/or omissions in the data sheets. In some cases, this included data that was associated with an acceptance criteria. In each of these cases, subsequent tests demonstrated that the previous results were not actually in question. However, the inspectors were concerned that data was logged, verified, and checked by multiple levels of supervision without being identified as outside acceptance criteria.

- Previous battery performance and service discharge tests were not performed correctly or completely. In most cases over the last 5 years, with this and other station batteries, the test equipment either failed or was improperly programmed for the capacity tests. This resulted in the certification, or evaluation, of the battery's capacity by extrapolation methods (i.e., partial test, with supporting evaluation).

- Maintenance and engineering personnel were maintaining information battery problems and/or trending outside of official station procedures or the corrective action program.

The inspectors noted that, in a review of weekly and quarterly Battery 2D12 surveillance tests for the previous year, no physical anomalies were documented. Although these procedures specifically required inspection for the above attributes, the test procedures were consistently marked as "None" or "N/A" for identified problems. The inspectors also noted that individual cell parameters were sometimes outside administrative limits. Arkansas Nuclear One (ANO) weekly and quarterly procedures require the documentation of parameters outside these limits. In most cases this was not performed within plant procedures or the corrective action system. In several cases, the values were documented and evaluated as requiring trending on upcoming tests. However, the inspectors noted that this trending was not documented in the subsequent tests.

Individual Cell 40 was replaced in January 2003. The new cell dropped below the Technical Specification limit of 2.13 volts in March. The licensee replaced Cell 40 with another new cell. Within several days of the second replacement, this cell again fell below 2.13 volts. The licensee consulted with C&D Technologies, the battery vendor. The licensee received permission from the vendor to raise battery float voltage, from 130.5 volts to 133 volts, for up to a month to attempt to raise the individual cell's voltage. The inspectors noted that the Battery 2D12 bank was about 16 years old and that the Institute for Electronic and Electrical Engineers (IEEE)-450 guidancerecommends that new cells not be added to old batteries. The inspectors, NRC Region IV, and NRC Headquarters personnel had several discussions with the licensee about Battery 2D12's apparent performance.

As documented in Section 1R22 of this report, the inspectors also reviewed surveillance tests conducted after float voltage was raised for Battery 2D12. The inspectors noted that individual cell parameters, of voltage and specific gravity, were not consistent with IEEE-450 or vendor recommendations. Inspectors noted that parameters varied to the

point where an equalizing charge was recommended by the vendor manual, due to some cells being more than 0.04 volts, or 0.01 specific gravity units, below the bank average. The inspectors also noted that some cells had high voltage and low specific gravities while others exhibited the opposite conditions. The inspectors were concerned about the physical characteristics of the battery, the raised float voltage, battery age, and whether or not this indicated immediate concerns with battery operability. The inspectors were concerned with the aggregate affect of these problems and the potential masking of adverse conditions due to several of these problems being interrelated.

The licensee conducted several reviews and evaluations based upon the inspectors' questions. The licensee initiated Condition Report (CR) 2-ANO-2003-00703 to address the aggregate affects of recently identified Battery 2D12 issues. The licensee concluded that there was some deterioration, some aging concerns, some inconsistencies with battery parameters, and a significant lack of documentation for battery conditions. The licensee also concluded that IEEE-450 and vendor guidance was not adequately incorporated into maintenance practices for the battery. However, the licensee assessed that the battery was still operable. On June 5, 2003, a field representative of C&D Technologies toured Battery 2D12 and met with NRC inspectors. The representative also concluded that the conditions were acceptable and did not represent a compromise of the battery's ability to deliver its designed capacity. The licensee and the C&D Technologies representative also informed the inspectors that remaining at the elevated float voltage for the remainder of the operating cycle was acceptable and that it should improve overall convergence of cell parameters.

Subsequent to the vendor visit, the inspectors reviewed the May Battery 2D12 quarterly test and compared the results with the February values. The inspectors found that two cells were more than 0.04 volts below the bank average in the February test. However, there were nine cells outside this value in the May test. This indicated that, instead of converging cell parameters, the cells were actually diverging. The inspectors, NRC Region IV, and Headquarters personnel again raised concerns to the licensee that Battery 2D12 performance was potentially degraded.

ANO engineering and management reviewed the overall condition of the battery bank and concluded that replacement of the bank would be scheduled for the fall 2003 outage. These personnel also informed the NRC that they would increase the monitoring of Battery 2D12 until the outage. This would include monitoring overall condition and bank voltage along with individual cell voltage, specific gravity, and temperature on a weekly basis.

Analysis

The degradations discovered in Battery 2D12 impacted the reliability and capability of Battery 2D12, which affected the mitigating system cornerstone objective. The safety significance is unresolved pending evaluation of the future performance of Battery 2D12. Battery 2D12 was determined to be in a condition where it would be

currently able to provide its design safety function. The issue was considered more than minor because it affected the mitigating systems cornerstone objective for the ability to mitigate the consequences of accident by providing emergency safeguard feature power or actuation. These conditions could also be reasonably considered more significant, if left uncorrected, because they represented ongoing deterioration. The cause of this violation has crosscutting aspects of problem identification and resolution and is referenced in Section 4OA2 of this report.

Enforcement

Criterion XVI of 10 CFR Part 50, Appendix B, requires that licensees establish measures to assure conditions adverse to quality are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition. The identification of the significant condition adverse to quality, the cause of the condition, and the corrective action taken shall be documented and reported to appropriate levels of management. The inspectors identified numerous conditions which could adversely affect the quality of Battery 2D12. Most of these conditions had not been identified by the licensee. Some of the conditions, including individual cell parameters outside administrative limits, were documented using informal methods which did not allow the conditions to be assessed for proper corrective action by station management. The licensee has entered these concerns in their corrective action program as CR-2-ANO-2003-00457, CR-2-ANO-2003-00646, CR-2-ANO-2003-00703, and CR-2-ANO-2003-00871. Therefore, the multiple examples of failing to identify and correct conditions adverse to Battery 2D12 is in violation of NRC requirements. This violation is unresolved pending further evaluation of the performance of Battery 2D12 from now until it is replaced (Unresolved Item (URI) 05000368/2003003-01).

1R05 Fire Protection

.1 Routine Inspection (71111.05Q)

a. Inspection Scope

The inspectors referenced the Fire Hazards Analysis Report, Revision 7, during the following inspections to ensure that conditions were consistent with the requirements of the licensee's fire protection program for fire protection systems design, control of transient combustibles and ignition sources, fire detection and suppression capability, fire barriers, and any related compensatory measures. Additional documents reviewed included Procedure 2203.014, "Alternate Shutdown," Revision 14; Technical Guideline 2203.014, "Alternate Shutdown," Revision 14; "ANO Pre-Fire Plan,"

Revision 1; Procedure 1000.047, "Control of Combustibles," Revision 15; and Procedure 2203.034, "Fire or Explosion," Revision 5.

- Unit 2 cable spreading rooms on May 14, 2003
- Unit 2 lower south electrical penetration room on May 15, 2003
- Unit 1 north emergency diesel generator room, Fire Zone 86-G, on April 21, 2003
- Unit 1 south emergency diesel generator room, Fire Zone 87-H, on April 22, 2003
- Diesel fuel storage vault corridor and diesel fuel storage vaults, Fire Zones 250, 251, 252, 253, and 254, on May 14, 2003

b. Findings

No findings of significance were identified.

.2 Annual Inspection (71111.05A)

a. Inspection Scope

The inspectors observed a fire brigade drill on May 13, 2003, in the Unit 2 electrohydraulic control unit (Fire Zone 2200-MM) to evaluate the readiness of the licensee's fire brigade to fight fires. The inspectors used Fire Hazards Analysis, Revision 7, the ANO Pre-Fire Plan, Revision 1, as part of this review. The inspectors reviewed the strategies and information in the Pre-Fire Plan to verify it was consistent with the fire protection design features, fire zone boundaries, and combustible loading assumptions shown in the plan. The inspectors observed the firefighting equipment brought to the scene to evaluate whether sufficient equipment was available at the fire scene for the simulated fire. The inspectors observed firefighting directions and radio communications between the brigade leader, brigade members, and the control room.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

.1 Routine Maintenance Effectiveness Inspection (71111.12Q)

a. Inspection Scope

The inspectors independently verified that licensee personnel properly implemented 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." The inspectors focused the review on whether the structures, systems, or components (SSCs) that experienced problems were properly characterized in the scope of the program. They also reviewed whether the SSC failure or performance problem was properly characterized. The inspectors assessed the adequacy of the licensee's significance classification for the SSC. This included the appropriateness of the performance criteria established for the SSC (if applicable) and the adequacy of corrective actions for SSCs classified in accordance with 10 CFR 50.65(a)(1) as applicable. The following plant systems were reviewed:

- Unit 1 fuel handling system
- Unit 2 chemical volume and control system
- Unit 1 service water system (specifically Pump 1P-4B)
- Alternate ac diesel generator

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)

a. Inspection Scope

The inspectors evaluated and discussed with the licensee the risk assessments listed below to verify that assessments were performed when required and appropriate compensatory actions were taken. The inspectors reviewed these assessed risk configurations against actual plant conditions and any in-progress evolutions or external events to verify that the assessments were accurate, complete, and appropriate for the conditions. In addition, the inspectors walked down the control room and plant areas to verify that compensatory measures identified by the risk assessments were appropriately performed.

- Units 1 and 2 risk assessment associated with the site power reduction to 1550 MW (net) power to support emergency maintenance affecting the Pleasant Hill 500 kV transmission line conducted on May 7, 2003

- Isolation of the fire protection deluge systems to the Unit 1 main transformer, auxiliary transformer, and Startup 2 transformer on June 14, 2003
- Unit 1 Emergency Diesel Generator 1 surveillance testing on June 16, 2003

b. Findings

No findings of significance were identified.

1R14 Personnel Performance Related to Nonroutine Plant Evolutions and Events (71111.14, 71153)

a. Inspection Scope

The inspectors observed the following nonroutine evolutions to verify that they were conducted in accordance with licensee procedures and Technical Specification requirements:

- Unit 1 power reduction to approximately 65 percent power on May 7, 2003, to support emergency maintenance activities in the Pleasant Hill 500 kV substation. Unit 1 was selected to reduce load to achieve a maximum site output of 1550 MW (net). Unit 1 power was restored to 100 percent on May 9, 2003. The power reduction and ascension was performed in accordance with Procedure 1102.004, "Power Operation," Revision 41.
- Units 1 and 2 operator response to a loss power on the Pleasant Hill transmission line. On May 13, 2003, the site experienced loss of power on the Pleasant Hill transmission line during severe thunderstorms in the area. The inspectors responded to the control room and monitored activities performed by the Units 1 and 2 operators to verify that the required actions of Technical Specifications and station procedures were taken.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed operability determinations to assess the correctness of evaluations, the use of compensatory measures, if needed, and compliance with the Technical Specifications. The inspectors' review included a verification that operability determinations were made as specified by the licensee's Procedure LI-102, "Corrective Action Process," Revision 2, and Procedure 1000.104, "Condition Reporting and Immediate Reportability Determinations," Revision 17. The technical adequacy of the

determinations was reviewed and compared to the Technical Specifications, Technical Requirements Manual, UFSAR, and associated licensing-basis documentation, as appropriate. The operability determinations that were reviewed were documented in the following documents:

- Engineering Request ER-ANO-2003-0408; Evaluate documented physical conditions of Battery 2D12

- CR-ANO-1-2003-0553; Operability of Batteries D06 and D07 with high cell specific gravities

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds (71111.16)

a. Inspection Scope

The inspectors conducted interviews with operators and system engineers concerning operator workarounds. The inspectors also reviewed the Unit 2 control room deficiency and operator workaround lists to determine the number of operator work-arounds that existed and to assess their cumulative effect.

b. Findings

No findings of significance were identified.

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

For the maintenance activities identified below, the inspectors observed the postmaintenance testing activities in the control room or locally and/or reviewed the test data obtained from the field. The inspectors observed whether the tests were performed in accordance with procedures, that the procedures' acceptance criteria were consistent with the Technical Specifications and the supporting license change application, and that the results recorded met the test acceptance criteria. These activities included:

- Alternate ac diesel generator testing in accordance with Procedure 2104.037, "Alternate AC Diesel Generator Operations," Revision 6, on June 5, 2003

- Unit 1 gaseous radwaste testing in accordance with Procedure 1305.013, "Leak Testing the Gaseous Radwaste System," Revision 8, on June 11, 2003

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed from either the control room or locally the performance of and/or reviewed the documentation for the following surveillance tests. This was done to verify that the surveillance tests were performed in accordance with approved licensee procedures and met Technical Specification requirements. In addition, the applicable test data was also reviewed to verify whether they met Technical Specifications, UFSAR, and licensee procedure requirements.

- Procedure 2403.023, "2D12 Quarterly Surveillance," Revision 14, for February 2003 (Maintenance Action Item (MAI) 78018) on April 29, 2003
- Procedure 1307.023, "1D07 Quarterly Surveillance," Revision 1, for February 2003 on May 14, 2003
- Procedure 1307.063, "1D07 Battery Surveillance," Revision 1, for March 12, 2003, on May 14, 2003
- Procedure 2403.023, "2D12 Quarterly Surveillance," Revision 14, for May 2003 (MAI 82882) on June 10, 2003
- Procedure 1104.036, Emergency Diesel Generator Operation," Supplement 1, Revision 41, performed on May 19, 2003
- Procedure 1104.004, "Decay Heat Removal Operating Procedure," Supplement 2, Revision 70, performed on May 27, 2003
- Procedure 1104.029, "Service Water and Auxiliary Cooling System," Supplement 2, Revision 55, performed on June 4, 2003
- Procedure 2104.036, "Emergency Diesel Generator Operations," Supplement 2B, Revision 46, performed on June 4, 2003
- Procedure 1104.036, "Emergency Diesel Generator Operations," Supplement 1, Revision 41, performed on June 16, 2003

b. Findings

No findings of significance were identified.

1EP2 Alert and Notification System Testing (71114.02)

Cornerstone: Emergency Preparedness

a. Inspection Scope

The inspectors reviewed siren failure trend data and testing records for Calendar Year 2002 and the first quarter of 2003. The inspectors interviewed members of the facility emergency preparedness staff and the director of the Arkansas Department of Health's office of Nuclear Planning and Response Programs (NPRP). The inspectors also reviewed CRs related to siren failures, related maintenance action item requests, and other documents listed in the attachment. The licensee's siren testing program was compared with the guidance of NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Revision 1; and Federal Emergency Management Agency (FEMA) document FEMA-REP-10, "Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plant."

b. Findings

Introduction. The inspectors identified a finding related to the adequacy of the means established for notification of members of the populace in the plume exposure emergency planning zone (EPZ) having a potential safety significance of greater than very low significance. This is a URI because additional information is required to determine both the compliance aspects and significance of the finding.

Description. Prior to September 1999, the two local electric utilities serving residential and commercial electric customers in the ANO plume exposure pathway EPZ provided new customer hookup reports to NPRP. NPRP then compared the names and addresses on the new hookup reports to the master National Oceanic Atmospheric Administration (NOAA) tone alert radio distribution list maintained by NPRP. If a new hookup was not on the tracking list as having already received a NOAA radio, a one page letter was sent to the new address which informed the resident of the availability of an emergency information booklet (EIB) and how to obtain the booklet if desired. The letter requested that the new resident fill out and return a "special needs" form if they would require assistance in the event an evacuation was ordered. The letter also stated that "If you are unable to hear a warning siren, you may be eligible for a NOAA Weather Radio receiver."

In September 1999, during a monthly meeting between NPRP and ANO, a change to the reporting capabilities of one of the local electric utilities, Entergy Arkansas, Inc. (EAI), was discussed. EAI indicated that they would not be able to supply a new hookup report due to a change in their customer service software. During the meeting, NPRP and ANO concluded that receipt of the reports was not required, given the many other methods of distribution and availability of the EIBs at different locations in the EPZ. For new residents in particular, these included availability of EIBs at county courthouses,

banks, utility offices, county fairs, and other public locations. A newcomer's guide was distributed to new residents of the Russellville metropolitan area that contained information similar to the letter from NPRP described above for new hookups. Additionally, periodic public service radio and television announcements and an annual mailing of EIBs to all postal addresses in the EPZ provided information on the availability of NOAA radios.

Since September 1999, no new hookup information was received from EAI. For new residents in the EAI service area, which is approximately 65 percent of the area of the EPZ, NPRP made no direct contact to inform new residents of the availability of NOAA radios for use in the event of an emergency condition at ANO. The other local electric utility, Arkansas Valley Electric Cooperative, continued to send the new hookup reports, although not on any established frequency, and neither the Cooperative nor NPRP maintained records of the reports.

The inspectors reviewed Section 3.2.2.2, "Tone Alert Radios (NOAA)," of the FEMA approved Alert and Notification System (ANS) design report, which states in paragraph 4 that "Utilities provide computerized listings of all new contacts. These persons are contacted and offered a free NOAA radio if they are in the affected area." The inspectors concluded that ANO may not be meeting the approved ANS design requirement for the following reasons: (1) new contact lists have not been received from one of the two utilities that service the EPZ since September 1999, (2) new residents are not directly contacted by the state NPRP office, (3) new residents must obtain and interpret information that is made publicly available in the EIB to determine if they are outside siren coverage and may require a tone alert radio, (4) the EIB does not give adequate guidance to assist the resident to determine the need for a radio, and (5) new residents must contact the state office to request a tone alert radio. The NRC has requested by letter to FEMA (ADAMS Accession Number ML031350415) that FEMA determine if the use of the EIB as a contact method for new residents is acceptable for meeting the approved design.

The inspectors also identified that ANO did not conduct periodic audits or surveillances scheduled specifically to review the implementation of the Early Warning System (alert sirens and NOAA radios) testing and maintenance programs by the NPRP office. The inspectors determined that annual assessments of the emergency preparedness program elements were being completed; however, review of the NPRP conduct of the testing and maintenance programs was not defined as an element to be reviewed.

The licensee has entered this finding in their corrective action process as significant, CR-ANO-C-2003-0340, which requires a formal root cause analysis and identification of corrective actions.

Analysis. The finding potentially impacted the ability of the licensee to ensure that the means to notify all members of the populace in the EPZ were established. Because the finding affected the reactor safety emergency preparedness cornerstone objective, the finding is greater than minor. The finding also was determined to have a potential safety

significance greater than very low because of the potential degradation of the risk significant planning standard, 10 CFR 50.47(b)(5), in that less than 100 percent of the population in the EPZ would be alerted as required by the ANS design. This is not an immediate safety concern because the licensee promptly identified the populace that may not have been offered notification equipment and took steps to offer this equipment to them.

Enforcement. 10 CFR 50.47(b)(5) states, in part, that a ". . . means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone have been established." Paragraph 4, Section 3.2.2.2, "Tone Alert Radios (NOAA)," of the FEMA approved ANS design report states that "Utilities provide computerized listings of all new contacts. These persons are contacted and offered a free NOAA radio if they are in the affected area." Contrary to the above, since September 1999, listings of new contacts (people living within the area) were not received for all new contacts, and those new contacts were not directly contacted and offered a NOAA radio. Pending determination of the acceptability from FEMA of the contact method used to meet the approved ANS design, this finding is identified as URI 05000313/2003003-02; 05000368/2003003-02, "Adequacy of Means to Notify Populace in EPZ."

1EP3 Emergency Response Organization Augmentation Testing (71114.03)

a. Inspection Scope

The inspectors discussed with the licensee changes made to the installed systems and testing programs for automatic phone dialing and paging systems during Calendar Years 2002 and 2003. The inspectors reviewed the results of annual augmentation recall drills conducted for Calendar Year 2002 and the first quarter of Calendar Year 2003, as well as training and drill attendance records. As part of the inspection, the inspectors reviewed the licensee's emergency plan and the requirements of 10 CFR Part 50, Appendix E, to ascertain the requirements for continued ability to staff emergency response facilities. Documents reviewed during the inspection are listed in the attachment.

b. Findings

No findings of significance were identified.

1EP4 Emergency Action Level (EAL) and Emergency Plan Changes (71114.04)

a. Inspection Scope

The inspectors performed a review of Change 037-01-00 to Procedure 1903.010, "Emergency Action Level Classification," against the previous revision and 10 CFR 50.54(q) to determine if the revision decreased the effectiveness of the emergency plan. This change revised EALs 6.2 (Alert) and 6.3 (Site Area Emergency)

to clarify how response of the diverse scram system affected these reactor protection system failure EALs. This change also modified several EALs to include a consistent definition of reactor coolant system leakage and normal charging pump makeup capacity.

b. Findings

No findings of significance were identified.

1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies (71114.05)

a. Inspection Scope

The inspectors reviewed documents related to the licensee's corrective action program to determine the licensee's ability to identify and correct problems in accordance with the requirements of 10 CFR 50.47(b)(14) and 10 CFR Part 50, Appendix E. Documents reviewed during the inspection are listed in the attachment.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

The inspectors observed portions of the announced emergency preparedness drill conducted on May 28, 2003, to evaluate emergency response organization performance by focusing on the risk-significant activities of classification, notification, and protective action recommendations. The inspectors also assessed personnel recognition of abnormal plant conditions, the transfer of emergency responsibilities between facilities, communications, and the overall implementation of the emergency plan. The drill was conducted using the Unit 2 simulator and all onsite response facilities (Emergency Operations Facility, Technical Support Center, and the Operations Support Center) were activated.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Control to Radiologically Significant Areas (71121.01)

a. Inspection Scope

To review and assess the licensee's performance in implementing physical and administrative controls for airborne radioactivity areas, radiation areas, high radiation areas, and locked high radiation areas, the inspectors interviewed radiation workers and radiation protection personnel involved in high dose rate and high exposure jobs. The inspectors discussed changes to the access control program with the radiation protection manager. The inspectors also conducted plant walkdowns within the radiologically controlled area and conducted independent radiation surveys of selected work areas. The following items were reviewed and compared with regulatory requirements:

- Area postings and other access controls for airborne radioactivity areas, radiation areas, locked high radiation areas, and very high radiation areas
- Access controls, radiation work permits, and radiological surveys involving airborne radioactivity areas and high radiation areas
- Locked high radiation area key controls
- Internal dose assessment for exposures exceeding 50 mrem committed effective dose equivalent (No opportunities for review were identified.)
- Setting, use, and response of electronic personal dosimeter alarms
- Conduct of work by radiation protection technicians and radiation workers in areas with the potential for high radiation dose (No opportunities were provided to observe radiological significant work during the inspection week.)
- Dosimetry placement when work involved a significant dose gradient
- Controls involved with the storage of highly radioactive items in the spent fuel pool
- Quality Assurance Surveillance Report QS-2003-ANO-031, "Access Controls to Radiologically Significant Areas"
- A summary of access controls and high radiation area work practice related corrective action documents (CRs) written since April 2002 and selected specific examples

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification (71151)

.1 Occupational Radiation Safety Cornerstone

a. Inspection Scope

The inspectors reviewed corrective action program records involving locked high radiation areas (as defined in Technical Specification 5.7.2), very high radiation areas (as defined in 10 CFR 20.1003), and unplanned exposure occurrences (as defined in Nuclear Emergency Institute(NEI) 99-02) for the past 12 months to confirm that these occurrences were properly recorded as PIs. Radiologically controlled area entries with exposures greater than 100 millirems within the past 12 months were reviewed and selected examples were examined to determine whether they were within the dose projections of the governing radiation exposure permits. Whole body counts or dose estimates were reviewed if the radiation worker received a committed effective dose equivalent of more than 100 millirems. Where applicable, the inspectors reviewed the summation of unintended deep dose equivalent and committed effective dose equivalent to verify that the total effective dose equivalent did not surpass the PI threshold without being reported.

b. Findings

No findings of significance were identified.

.2 Public Radiation Safety Cornerstone

a. Inspection Scope

The inspectors reviewed radiological effluent release program corrective action records, licensee event reports, and annual effluent release reports documented during the past four quarters to determine if any doses resulting from effluent releases exceeded the PI thresholds (as defined in Bulletin NEI 99-02).

b. Findings

No findings of significance were identified.

.3 Emergency Preparedness Cornerstone

a. Inspection Scope

The inspectors sampled licensee submittals for the performance PIs listed below in the Emergency Preparedness Cornerstone for the period from January 2002 through March 2003. To verify the accuracy of the PI data reported during that period, PI

definitions and guidance contained in Bulletin NEI 99-02, "Regulatory Assessment Indicator Guideline," Revision 2, were used to verify the basis in reporting for each data element.

- Drill and exercise performance
- Emergency response organization drill participation
- ANS

The inspectors reviewed a sampling of drill and exercise scenarios, licensed operator simulator training sessions, notification forms, and attendance and critique records associated with training sessions, drills, and exercises conducted during the verification period. The inspectors reviewed selected emergency responder qualification, training, and drill participation records. The inspectors reviewed siren test and maintenance records and procedures. The inspectors also interviewed licensee personnel that were accountable for collecting and evaluating the PI data.

b. Findings

No findings of significance were identified. However, the inspectors identified an error in the reported emergency response organization drill participation PI as well as a potential program vulnerability involving the future accuracy of reported data.

The inspectors identified that one individual was counted in error during the second quarter of 2002 since that individual had left the utility late in the first quarter. This error, when corrected, did not affect the reported PI.

The inspectors also determined that the method being used to determine the qualification status of shift managers was not consistent with NEI 99-02 guidance. Specifically, if a shift manager was determined to not have completed a minimum of five proficiency watches during the quarter being evaluated, he was not counted as a qualified shift manager for PI reporting for that quarter. The inspectors noted that, as of the last day of the quarter, the shift manager was still eligible to perform the duties of the shift manager and, therefore, should be counted in the PI. The inspectors determined that the licensee's data collection method had no affect on the reported PI.

.4 Performance Indicator Verification (71151)

a. Inspection Scope

The inspectors reviewed the station logs for Units 1 and 2 operations for the past 6 months to verify the accuracy and completeness of the data used to calculate and report the following performance indicators in accordance with Procedure LI-107, "NRC Performance Indicator Process," Revision 2. The inspectors also reviewed the licensee's ANO NRC PI Graphs Excel Spreadsheet database to verify the licensee's data was consistent with station logs and PI data reported to the NRC. The inspectors

evaluated licensee PI collection and reporting practices against the standards of Bulletin NEI 99-02, "Regulatory Assessment Performance Indicator Guideline."

- Unit 1 - Unplanned Scrams per 7000 Critical Hours
- Unit 2 - Unplanned Scrams per 7000 Critical Hours
- Unit 1 - Scrams with Loss of Normal Heat Removal
- Unit 2 - Scrams with Loss of Normal Heat Removal
- Unit 1 - Unplanned Power Changes per 7000 Critical Hours
- Unit 2 - Unplanned Power Changes per 7000 Critical Hours
- Unit 1 - Reactor Coolant System Leakage
- Unit 2 - Reactor Coolant System Leakage

b. Findings

No findings of significance were identified.

4OA2 Problem Identification and Resolution

.1 Annual Sample Review (Emergency Preparedness)

a. Inspection Scope

The inspectors selected two assessment reports for detailed review, Quality Assurance Audit Report QA-7-2002-ANO-1, March 7 through May 9, 2002; and Assessment Report LO-ALO-C-2003-00063, March 17-20, 2003. The assessment reports were associated with a review of emergency preparedness program elements. The reports were reviewed to ensure that the full extent of the issues were identified, an appropriate evaluation was performed, and appropriate corrective actions were specified and prioritized. The inspectors evaluated the reports against the requirements of the licensee's corrective action program as delineated in Procedure LI-102, "Corrective Action Process," Revision 2.

b. Findings

There were no findings identified associated with the two reviewed samples; however, the inspectors identified one instance in which a corrective action was not proceduralized to ensure the action would continue in the future. CR-ANO-C-2002-257 initiated a corrective action to store material for personnel decontamination in the upper floor of the training center, which would be used as a decontamination and assembly area in the event of an evacuation from ANO. The inspectors verified that the corrective action had been taken prior to closing the CR; however, the inspectors determined that there was no procedure change conducted to ensure the decontamination material would be maintained at that location in the future. The license initiated a procedure change to a radiation health physics procedure checklist to add staging and maintenance of the decontamination material in the training center.

The inspectors noted that there were no periodic audits or surveillances scheduled to review the implementation of the Early Warning System (alert sirens and NOAA radios) testing and maintenance programs, which were conducted by the NPRP office. The significance and compliance aspects of this observation will be reviewed as an element of unresolved item (URI) 05000313/2003003-02; 05000368/2003003-02 described in this report.

.2 Cross-References to Problem Identification and Resolution Findings Documented Elsewhere

Section 1EP2 describes the URI 05000313/2003003-02; 05000368/2003003-02 identified during the inspection. One element of the URI is the adequacy of the licensee's audit program to be able to identify poor performance or adverse trends in the implementation of the NOAA radio program by the NRRP office. Lack of an adequate audit program could result in a lack of identification of problems, which would allow a degraded condition to continue to worsen. The licensee did not conduct audits of the NPRP program, which reduced their opportunity to identify any potential concern in implementation of that program.

A URI 05000368/2003003-01, with crosscutting aspects of problem identification and resolution, was identified in Section 1R04.

4OA5 Other Activities

.1 Preoperational Independent Spent Fuel Storage Installation (ISFSI) Demonstrations (60584)

a. Inspection Scope

Condition 10.f of Certificate of Compliance 72-1014 for the Holtec Hi-Storm 100 cask system requires the licensee to perform multi-purpose canister (MPC) welding, nondestructive evaluation (NDE) inspections, hydrostatic testing, draining, moisture removal, helium backfilling, and leakage testing. Condition 10.j of Certificate of Compliance 72-1014 requires the licensee to demonstrate cask system unloading, cooling fuel assemblies, flooding the canister cavity, and removing canister lid welds. The licensee must perform all steps referenced in Condition 10 prior to the first use of the system to load spent fuel.

During the weeks of March 17-20 and April 21-24, 2003, the inspectors observed all the above preoperational ISFSI demonstrations performed by the licensee with the exception of the requirement to unload a cask system. The unloading portion of the requirement will be performed during another demonstration. The demonstrations were performed in preparation for the future use of the Holtec Hi-Storm 100 dry fuel storage cask system. The purpose of the preoperational inspections is to ensure that the licensee will be prepared to successfully load spent fuel and operate an ISFSI using the Holtec Hi-Storm 100 system. The licensee will use the Holtec Hi-Storm 100 cask

system after completing the loading of the 24th Sierra Nuclear Cask VSC-24 planned for the summer of 2003.

The following demonstrations were observed during the two inspections:

- Placement of the MPC lid to shell gap shims
- Visual inspection of the MPC gap shim placement and tacking
- MPC lid to shell root pass, intermediate, and final cap welding
- Visual and NDE inspection of the lid to shell root pass, intermediate and final cap welding
- Ring enclosure and vent and drain port cover welding
- Visual and NDE inspection of the ring enclosure and vent and drain port cover welding
- Helium leakage testing of the vent and drain port covers
- Vent and drain port cover plate removal (weld removal)
- MPC cooling of fuel assemblies
- MPC cavity flooding, hydrostatic pressure testing, and draining
- MPC vacuum drying (moisture removal) and helium backfill

Inspector review of the licensee's work plans and procedures related to Condition 10.f and 10. j determined that they were approved, comprehensive, tested, and were functional. In addition, the licensee provided a video tape of the complete cask cutting demonstration, titled "Dry Fuel Storage Multi-Purpose Canister Lid Removal Operations," for NRC review. The following procedures and work plans were reviewed during the preoperational demonstrations:

- Work Plan 1409.750, "MPC Welding Operations," Change 01, dated March 13, 2003
- Work Plan 1407.754, "MPC Fluid Operations," Change 0, dated April 16, 2003
- Work Plan 1409.751, "MPC Weld Removal Operations," Change 01, dated March 14, 2003
- NDE 9.70, "Helium Leak Detection for Dry Fuel Storage," Revision 0, dated March 20, 2003

- Procedure 1601.305, "Radiation Monitoring Requirements for Loading and Storage of the Hi-Storm," Change 0, dated March 14, 2003
- Procedure 1601.306, "Radiation Monitoring Requirements for Unloading of the Hi-Storm," Change 0, dated March 14, 2003
- STM 2-07-1 "Arkansas Nuclear One Unit 2 System Training Manual, Dry Fuel Storage," Revision 2, Draft, dated January 23, 2003

b. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

The inspectors presented the inspection results of the radiation protection inspection to Mr. C. Eubanks, General Manager, Plant Operations, and other members of licensee management at the conclusion of the inspection on March 28, 2003. The licensee acknowledged the findings presented.

On May 1, 2003, the inspectors presented the preliminary inspection results of the emergency preparedness inspection to Mr. C. Anderson and other members of his staff who acknowledged the findings. The inspector presented the final results to Mr. C. Eubanks and other members of licensee management by telephone conference on May 8, 2003.

The resident inspectors presented the inspection results of the resident inspections to Mr. C. Anderson, Vice President, Operations, and other members of the licensee's management staff on July 2, 2003. The licensee acknowledged the findings presented. The inspectors noted that, while proprietary information was reviewed, none would be included in this report.

40A7 Licensee-Identified Violations

The following violation of very low significance (Green) was identified by the licensee and is a violation of NRC requirements which meet the criteria of Section VI.A of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as a noncited violation.

Unit 1 Technical Specification 5.7.1 requires that any individual or group of individuals permitted to enter a high radiation area shall be provided with a radiation monitoring device that continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. However, on October 10, 2002, an individual entered into the Unit 1 reactor building, a posted high radiation area, without an alarming dosimeter. This event is documented in the licensee’s corrective action

program as CR-ANO-1-2002-1670. This finding is only of very low safety significance because there was no overexposure or substantial potential for an overexposure and the ability to assess dose was not compromised.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

C. Anderson, Vice President, Operations
G. Ashley, Licensing Manager
M. Chisum, Manager, Systems Engineering
M. Cooper, Licensing Specialist
S. Cotton, Director, Nuclear Safety Assurance
C. Eubanks, General Manager, Plant Operations
B. Fowler, Sr. Emergency Planner
R. Freeman, Emergency Planning Specialist
R. Fuller, Senior Oversight Specialist, Corporation Assessments
C. Eubanks, General Manager, Plant Operations
B. Gordon, Manager, P & S/Outage
D. Hawkins, Specialist, Licensing
J. Hoffpauir, Plant Manager, Operations
R. Holleyfield, Manager, Emergency Preparedness
D. James, Manager, Engineering Programs and Components
D. James, Manager CA&S
J. Kowalewski, Director, Engineering
J. Miller, Jr., Manager, Training and Development
T. Mitchell, Manager, Unit 2 Operations
B. Patrick, Operations Supervisor, Radiation Protection
D. Scheide, Licensing Specialist
C. Tyrone, Manager, Quality Assurance
C. Zimmerman, Plant Manager, Support

Other

C. Meyers, Director, Nuclear Planning and Response Program
Arkansas Department of Health

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

05000368/2003003-01	URI	Inadequate station battery monitoring (Sections 1R04 and 4OA2)
05000313,368/2003003-02	URI	Adequacy of means to notify populace in EPZ (Sections 1EP2 and 4OA2)

Discussed
None

LIST OF DOCUMENTS REVIEWED

In addition to the documents called out in the inspection report, the following documents were selected and reviewed by the inspectors to accomplish the objectives and scope of the inspection and to support any findings:

Condition Reports

CR-ANO-1-2002-01180	CR-ANO-2-2002-0924	CR-ANO-C-2002-0865
CR-ANO-1-2002-01316	CR-ANO-2-2002-01769	CR-ANO-C-2002-0966
CR-ANO-1-2002-01354	CR-ANO-2-2002-02199	CR-ANO-C-2002-0968
CR-ANO-1-2002-01453	CR-ANO-2-2003-0042	CR-ANO-C-2002-0969
CR-ANO-1-2002-01487	CR-ANO-C-2001-0708	CR-ANO-C-2003-0033
CR-ANO-1-2002-01512	CR-ANO-C-2002-0130	CR-ANO-C-2003-0042
CR-ANO-1-2002-01542	CR-ANO-C-2002-0241	CR-ANO-C-2003-0098
CR-ANO-1-2002-01654	CR-ANO-C-2002-0242	CR-ANO-C-2003-0145
CR-ANO-1-2002-01670	CR-ANO-C-2002-0253	CR-ANO-C-2003-0174
CR-ANO-1-2002-01705	CR-ANO-C-2002-0257	CR-ANO-C-2003-0334
CR-ANO-2-2002-0778	CR-ANO-C-2002-0359	CR-ANO-C-2003-0335
CR-ANO-2-2002-0787	CR-ANO-C-2002-0662	CR-ANO-C-2003-0340
CR-ANO-2-2002-0822	CR-ANO-C-2002-0371	CR-ANO-C-2003-0341
CR-ANO-2-2002-0865		

Miscellaneous

Number	Title	Revision/ Date
	ANO Training Desktop Guide EP-014, "Emergency Planning Performance Indicators"	6
	Arkansas Department of Health Procedure, "Guidelines for Activation, Testing, and Verification of Emergency Warning System," January 29, 1996	
	Arkansas Nuclear One Emergency Plan	28
	Assessment Report, LO-ALO-C-2003-00063, March 17-20, 2003	
TQ-110	Emergency Preparedness Training Program	2
	Entergy Southwest Emergency Preparedness Exercise Drill Guide	
	Federal Emergency Management Agency Alert and Notification System Design Report dated February 13, 1996	

Miscellaneous

Number	Title	Revision/ Date
	Maintenance Action Item 77077	
	Meeting minutes, between Arkansas Department of Health and ANO; January, February, and May of 2003	
	Quality Assurance Audit Report, QA-7-2002-ANO-1, March 7 through May 9, 2002	
	Summary of Emergency Preparedness related condition reports for calendar Year 2002 and the first quarter of calendar Year 2003	

Procedures

Number	Title	Change
1903.011	Emergency Response/Notification	027-00-0
1903.030	Evacuation	024-03-00
1903.062	Communications System Operating Procedure	018-02-00
1903.003	Assignment of Personnel to the Emergency Response Organization	15-00-0
1903.004	Administration and Maintenance of the Emergency Plan and Implementing Procedures	22-03-0
LI-107	NRC Performance Indicator Process	1
1903.10	Emergency Action Level Classification	037-00,01-0
LI-102	Corrective Action Process	2

LIST OF ACRONYMS

ANO	Arkansas Nuclear One
ANS	alert and notification system
CFR	*Code of Federal Regulations*
CR	condition report
EAI	Entergy Arkansas, Inc.
EAL	emergency action level
EIB	emergency information booklet
EPZ	emergency planning zone
FEMA	Federal Emergency Management Agency
ISFSI	Pre-operational Independent Spent Fuel Storage Installation
MPC	multi-purpose canister
NOAA	National Oceanic and Atmospheric Administration
NPRP	nuclear planning and response programs
PI	performance indicator
SSC	structures, systems, or components
URI	unresolved item