



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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ARLINGTON, TEXAS 76011-4005

April 20, 2007

EA 98-562

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

SUBJECT: ARKANSAS NUCLEAR ONE - NRC PROBLEM IDENTIFICATION AND
RESOLUTION INSPECTION REPORT 05000313/2007007; 05000368/2007007
AND EXERCISE OF ENFORCEMENT DISCRETION

Dear Mr. Mitchell:

On March 8, 2007, the U. S. Nuclear Regulatory Commission (NRC) completed the onsite portion of a team inspection at your Arkansas Nuclear One, Units 1 and 2. The enclosed report documents the inspection findings, which were discussed on April 3, 2007, with you and other members of your staff during an exit meeting.

This inspection reviewed activities conducted under your license as they relate to the identification and resolution of problems, compliance with the Commission's rules and regulations and the conditions of your operating license. Within these areas, the inspection involved examination of selected procedures and representative records, observations of activities, and interviews with personnel. The team reviewed 299 condition reports, several work orders, associated root and apparent cause evaluations, and other supporting documents. The team reviewed cross-cutting aspects of NRC and licensee-identified findings and interviewed personnel regarding the condition of your safety conscious work environment at Arkansas Nuclear One.

On the basis of the sample selected for review, the team concluded that your staff effectively identified, evaluated and prioritized and, generally, implemented effective corrective actions for conditions adverse to quality. Your performance remained generally consistent with the last problem identification and resolution inspection, with corrective action process improvements. One corrective action program related violation was identified, which indicated that additional effort is needed to ensure the effectiveness of corrective actions taken. The noncited violation involved failure to effectively implement actions to prevent recurrence of a significant condition adverse to quality, which resulted in a safety-related bus bar fire. This finding was determined to be a violation of NRC requirements. However, because of the very low safety significance (redundant equipment remained available) and because you entered the finding into your

corrective action program, the NRC is treating this finding as a noncited violation, in accordance with Section VI.A.1 of the NRC's Enforcement Policy. In addition, one licensee-identified violation related to ineffective corrective actions and determined to be of very low safety significance

is listed in this report. If you contest the violations or the significance of the violations, 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, D.C. 20555-0001, with copies to the Regional Administrator, U. S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas, 76011; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at the Arkansas Nuclear One, Units 1 and 2.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be 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 web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Linda J. Smith, Chief
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Division of Reactor Safety

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

Enclosure:
NRC Inspection Report: 05000313/2007007 and 05000368/2007007
w/attachment: Supplemental Information

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SUNSI Review Completed: LJS ADAMS: Yes No Initials: LJS
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GAPick/	RWDeese	JPAAdams	DLProulx	LJSmith
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04/4/07	04/4/07	04/7/07	04/3/07	04/17/07
C:PBE	ACES:SES	C:EB2		
JAClark	MVasquez	LJSmith		
/RA/	E=MHair for	/RA/		
04/6/07	04/5/07	04/20/07		

ENCLOSURE

U. S. NUCLEAR REGULATORY COMMISSION
REGION IV

Dockets: 50-313, 50-368
Licenses: DPR-51, NPF-6
Report: 05000313/2007007 and 05000368/2007007
Licensee: Entergy Operations, Inc.
Facility: Arkansas Nuclear One, Units 1 and 2
Location: Junction of Hwy. 64W and Hwy. 333 South
Russellville, Arkansas
Dates: January 22, through April 3, 2007
Team Leader: G. Pick, Senior Reactor Inspector, Engineering Branch 2
Inspectors: R. Deese, Senior Resident Inspector, Projects Branch E
D. Proulx, Senior Reactor Inspector, Engineering Branch 2
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Approved By: Linda Smith, Chief
Engineering Branch 2
Division of Reactor Safety

Enclosure

SUMMARY OF ISSUES

IR 05000313/2007007, 05000368/2007007; 01/22/2007 - 04/03/2007; Arkansas Nuclear One, Units 1 and 2; Biennial inspection of the identification and resolution of problems; one violation resulted from ineffective corrective actions

The inspection was conducted by two senior reactor inspectors, one senior resident inspector, and a reactor inspector. One Green noncited violation was identified during this inspection. 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 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.

Identification and Resolution of Problems

The team reviewed 299 condition reports, several work orders, engineering evaluations, associated root and apparent cause evaluations, and other supporting documentation to assess problem identification and resolution activities. The team concluded that the licensee effectively identified, evaluated and prioritized corrective actions for conditions adverse to quality. The licensee improved in their ability to use the condition report process to track adverse conditions documenting abnormal configurations or potential challenges to the normal station processes. Also the licensee improved in their coordination among plant processes when closing condition reports to other corrective action or work control documents. However, the team concluded that the licensee, generally, implemented timely, effective corrective actions, although some examples, including one violation, indicate continuing weakness in this area.

With minor exceptions, the licensee appropriately evaluated industry operating experience for relevance to the facility and had entered applicable items in the corrective action program. The licensee appropriately used industry operating experience when performing root cause and apparent cause evaluations. The licensee performed effective quality assurance audits and self-assessments, as demonstrated by self-identification of poor corrective action program performance and identification of ineffective corrective actions. The team concluded that the licensee established an acceptable and improving safety conscious work environment. Management took action to address the write-in comments from the 2006 safety culture survey. The team concluded from interviews that, although no safety conscious work environment concerns existed, the complaints related to general culture factors, if not addressed, might result in safety conscious work environment concerns.

Inspector-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. The team reviewed a self-revealing noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for failure of the licensee to take effective corrective action for earlier events in 1991 and 2001. This failure to ensure positive engagement of 480 volt circuit breakers resulted, on October 30, 2006, in a fire in Motor Control

Center 2B-53 and declaration of an alert. The licensee initiated Condition Report 2-2006-02444 to enter this issue into the corrective action program. In 1991, a fire occurred in Motor Control Center 2B-64 because misaligned breaker stabs created a high resistance connections that overheated when energized. For corrective action, the licensee trained electricians emphasizing the need to use care when installing breakers into breaker cubicles and proposed a revision to the maintenance procedure to inspect and ensure proper stab connections. In 2001, during inspections of Motor Control Center 2B-85, electricians discovered the center stab of one breaker in the breaker cubicle misaligned and found part of the spring clip burned away and part of the bus bar damaged. For corrective action, the licensee trained on proper insertion of a cubicle breaker into the motor control center and initiated a long-term action to perform a visual inspection of all Unit 2 motor control centers and their breakers.

The performance deficiency resulted from licensee personnel failing to take adequate corrective actions (e.g. revising procedures to include appropriate guidance). The finding is greater than minor because it is associated with the mitigating systems cornerstone attribute of protection against external factors and affects the associated cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The Phase 1 worksheets in Manual Chapter 0609, "Significance Determination Process," were used to conclude that a Phase 2 analysis was required because the initiating events, mitigating systems, and barrier integrity cornerstones were affected. The team performed a Phase 2 analysis using Appendix A, "Determining the Significance of Reactor Findings For At-Power Situations," of Manual Chapter 0609 and the Phase 2 worksheets for Arkansas Nuclear One. From the Phase 2 analysis results, the team determined this finding had very low safety significance (Green). The team concluded the cause of the finding had no definitive cross-cutting aspects (Section 4OA3).

Licensee-Identified Violations

The team evaluated one licensee-identified violation of very low safety significance. Corrective actions taken or planned by the licensee have been entered into the corrective action program. This violation and corrective actions are listed in Section 4OA7 of this report.

REPORT DETAILS

4 OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution

The team based the following conclusions, in part, on all issues identified in the assessment period that ranged from January 2005 to January 2007. The issues are divided into two groups. The first group (current issues) included problems identified during the assessment period where at least one performance deficiency occurred during the assessment period. The second group (historical issues) included issues that were identified during the assessment period but had performance deficiencies that occurred outside the assessment period. The team determined that all issues used in the assessments were current issues.

a. Assessment of the Corrective Action Program Effectiveness

(1) Inspection Scope

The team reviewed items selected across the seven cornerstones to verify that the licensee: (1) identified problems at the proper threshold and entered them into the corrective action system, (2) adequately prioritized and evaluated issues, and (3) established effective and timely corrective actions to prevent recurrence. The team observed control room operations and performed field walkdowns of the emergency diesel generator and 4160 kV systems for both units to inspect for deficiencies that should have been entered into the corrective action program. Additionally, the team reviewed a sample of self assessments, trend reports, and various other documents related to the corrective action program.

The team evaluated condition reports, work orders, and operability evaluations to assess the threshold for identifying problems, entering them into the corrective action program, and the ability to evaluate the importance of adverse conditions. Also, the team evaluated licensee efforts in establishing the scope of problems by reviewing selected self-assessments results, audits, and system health reports. Team members interviewed station personnel, attended Condition Review Group screening committee meetings and Condition Review Group meetings to understand the interface between the screening and prioritization of problems, as well as the interfaces with the operability assessment and work control processes. The team performed a historical review of condition reports written over the last 5 years that addressed the emergency diesel generator and 4 kV systems.

The team reviewed a sample of condition reports, apparent cause determinations, and root cause evaluations to ascertain whether the licensee properly considered the full extent of causes and conditions, generic implications, common causes, and previous occurrences. The team assessed the timeliness and effectiveness of corrective actions, completed or planned, and looked for additional examples of similar problems. The team sampled specific technical issues to evaluate the adequacy of operability determinations.

Additionally, the team reviewed condition reports that addressed past NRC- and licensee-identified violations to ensure that the corrective actions addressed the issues as described in the inspection reports. The team reviewed a sample of corrective actions closed to other condition reports, work orders, or tracking programs to ensure that corrective actions were still appropriate and timely.

(2) Assessments

(a) Assessment - Effectiveness of Problem Identification

The team determined that the licensee effectively identified problems. The team determined that the licensee improved during this period in their ability to use the condition report process more to track adverse conditions documenting abnormal configurations or potential challenges to the normal station processes (i.e., operator work arounds, components identified as degraded and nonconforming but operable, and operational decision making issues). Further, the team verified that the licensee processed assessment and audit results documenting adverse conditions in their corrective action program. The licensee established a low threshold for identifying adverse trends. Although the licensee routinely closed condition reports to other corrective action or work control documents, the team did not identify any failures to ensure the corrective actions were completed, which represented an improvement from past performance in this area.

(b) Assessment - Effectiveness of Prioritization and Evaluation of Issues

The team concluded that the licensee appropriately prioritized and evaluated conditions adverse to quality in accordance with the licensee's corrective action program guidance and NRC requirements. The team found that for the sample of root cause analyses reviewed, that the licensee was self critical and thorough in evaluating the causes of significant conditions adverse to quality. The team determined from attending Condition Review Group screening meetings and Condition Review Group meetings that management remained involved in assigning the appropriate priority and significance to identified deficiencies.

Although the licensee had difficulty performing operability evaluations early in the assessment period, the team determined that the ability to evaluate operability and degraded and nonconforming conditions had improved.

(c) Assessment - Effectiveness of Corrective Actions

Overall, the licensee implemented effective corrective actions to address conditions adverse to quality and had implemented process improvements, as a result of Quality Assurance audits, self-assessments, independent assessments and trend evaluations. Nevertheless, the team determined that some instances of ineffective corrective actions occurred during this assessment period (Examples 1-5).

The team determined that the licensee had a large number of corrective actions to prevent recurrence that exceeded their 180 day requirement. In addition, the team identified that a self-assessment and a followup effectiveness review determined that corrective actions to reduce the large number of outstanding corrective actions to prevent recurrence were not effective.

Current Issues

Example 1: Licensee personnel failed to properly install an electrical breaker that resulted in a small electrical fire and loss of safety related loads, as documented in Condition Report 2-2006-02444. From review of this self-revealing deficiency, the licensee determined that this event resulted from ineffective corrective actions from previous, similar events in 1991 and 2001. Specifically, the licensee failed to ensure electricians had sufficient knowledge to rack in electrical breakers of this type following previous, similar events (refer to Section 4OA3).

Example 2: Through adverse trend reviews, the licensee determined that they implemented ineffective corrective actions related to controls for high energy line break doors that had resulted in Noncited Violation 05000313; 05000368/2005004-03 (refer to Condition Report C-2005-1205). The licensee documented this example of ineffective corrective actions as a continuing adverse trend in Condition Report C-2006-01495. The team concluded that the licensee's corrective actions in response to the noncited violation included no actions to modify the behaviors related to awareness of propping open high energy line break doors.

Example 3: The team determined that the actions in response to a fire inside containment were ineffective, in that, there existed no evidence that any corrective actions were taken other than confirming the fire was extinguished (Condition Report 2-2006-01891).

Example 4: During a self-assessment and followup effectiveness review (Condition Report C-2006-00002), the licensee determined that the steps taken to reduce the number of outstanding corrective actions to prevent recurrence were not totally effective.

Example 5: One issue that developed late in the period relates to use of and adherence to procedures by operations personnel. Specifically, in the second quarter 2006, after an assessment identified poor procedure use behaviors, the licensee documented this issue as an adverse trend in Condition Report C-2006-01043. During this assessment, the team identified the actions taken to date have not been fully effective, as demonstrated by the following recent examples of this deficiency:

- Condition Report 2-2006-00737 documented that failure to follow procedure resulted in water overflowing from the fuel tilt pit. The team determined this deficiency was minor because of the lack of safety consequences and small amount of contamination.
- Condition Report 2-2006-01229 documented a failure to follow procedure that left two of six valves open (refer to Section 4OA7).

- Condition Report 2-2006-01464 documented a failure to follow procedure by an operator who failed to close a resin sluice header drain valve. Later, while operators were aligning the unit for alternate reactor coolant purification, a loss of approximately 230 gallons of reactor coolant system inventory occurred (Noncited Violation 05000368/2006005-03).
- Condition Report 2-2007-00021 documented licensee actions taken to identify reactor coolant system leakage. The team determined that the licensee failed to follow procedure that delayed identifying the source and prevented timely correlation between reactor coolant system leakage and increasing containment sump levels. The deficiency was minor since there was no significant leakage.
- Condition Reports 2-2007-00125 and 2-2007-00503 documented the failure of the shift manager to follow applicable work management procedures while conducting instrumentation and control maintenance to adjust a limiting safety system setting parameter associated with the reactor protection system (Noncited Violation 05000368/2007002-02).

b. **Assessment of the Use of Operating Experience**

(1) **Inspection Scope**

The team examined licensee programs for reviewing industry operating experience. The team selected a number of operating experience notification documents (NRC bulletins, information notices, generic letters, 10 CFR Part 21 reports, licensee event reports, vendor notifications, et cetera), which had been issued during the assessment period, to verify whether the licensee had appropriately evaluated each notification for relevance to the facility. The team then examined whether the licensee had entered those items deemed relevant into their corrective action program. Finally, the team reviewed a number of significant conditions adverse to quality and conditions adverse to quality to verify if the licensee had appropriately evaluated them for industry operating experience.

(2) **Assessment**

Overall, the team determined that the licensee had appropriately evaluated industry operating experience for relevance to the facility, and had entered applicable items in the corrective action program. The licensee appropriately evaluated for internal and external industry operating experience when performing root cause and apparent cause evaluations. The team identified one instance of ineffective processing of operating experience (Example).

Current Issues

Example: Operating Experience LO-OPX-2006-0393 documented information related to problems with the use of ultra-low-sulfur diesel fuel. The licensee issued Condition Report C-2006-2044 to evaluate the use ultra-low sulphur diesel fuel in plant

components and established administrative barriers to prevent purchase of this diesel fuel. The barriers failed since the purchase order did not specify a lower limit on sulphur content. Subsequently, the licensee added two batches of ultra-low sulphur diesel fuel to Tank T-25, an underground storage tank used to receive diesel fuel deliveries and supply the other tanks on site, including the diesel generators fuel oil storage tank. The team verified the fuel oil sampled in Tank T-25 remained within the current emergency diesel generator fuel oil design specifications.

c. **Assessment of Self-Assessments and Audits**

(1) Inspection Scope

The team reviewed numerous audits, self-assessments, quality surveillances, and site performance indicators. The team reviewed program procedures and interviewed process managers related to the performance improvement group, the corrective action program, and the Quality Assurance department. The team evaluated the use of self-assessments, the role of Quality Assurance, and the role of the corrective actions and assessment group related to licensee performance.

(2) Assessment

The team determined that the licensee performed effective Quality Assurance audits and self-assessments (Examples 1-3). For example, the licensee created an action plan to address numerous weaknesses described in the March 2006 Safety Culture assessment. Quality Assurance audits and surveillances were self-critical and provided detailed assessments of the reviewed organizations performance. The team verified that the licensee had implemented performance indicators and trended data that should allow the managers to evaluate the progress of their actions to improve performance related to human performance and corrective action program deficiencies. The team concluded that the licensee continued to have a strong self-assessment program. The number of self-assessments performed and the variety of ways used to assess site performance provided a broad perspective on site performance. The team concluded that the assessments were of good depth and effective in identifying problems and trends.

Current Issues

Example 1: The licensee initiated Condition Report C-2006-01495 to address an area for improvement from Assessment LO-ALO-2006-00098, "2006 Pre-NRC PI&R Assessment." This condition report documents an emerging trend since the corrective actions for previous NRC violation may not have been effective. Specifically, since the original noncited violation related to high energy line break doors, the licensee has discovered eight additional instances. The team independently assessed this area, as discussed in the effectiveness of corrective actions section.

Example 2: The licensee initiated Condition Report C-2006-01428 to address an area for improvement from Assessment LO-ALO-2006-00098. This condition report documented corrective actions for Condition Report C-2005-02360 (timely resolution of corrective actions to prevent recurrence) were ineffective as required by Corrective Action 3 in Assessment ALO-2006-00002.

Example 3: Quality Assurance initiated Condition Report 1-2005-00723 documents the failure of Design Nuclear Engineering to perform the required chemistry analysis for the second and third apparent fuel failures for Arkansas Nuclear One, Unit 1 during Cycle 19. After performing the required analysis, engineering confirmed the number of fuel failures met the number predicted by the site reactor engineers.

Example 4: Quality Assurance initiated Condition Report C-2005-00837 to document untimely resolution of issues, including inappropriate extensions to resolve an issue that required development of a pipe wall thinning monitoring program.

d. **Assessment of Safety Conscious Work Environment**

(1) Inspection Scope

The team reviewed the 2006 Nuclear Safety Culture Assessment results and an August 2006 Wackenhut Security Culture survey, including the redacted comments. The team reviewed the redacted comments to identify concerns that were expressed by more than a few people for further followup. The team found concerns that the licensee did not: (1) prioritize safety over production; (2) provide sufficient human resources to effectively perform duties (housekeeping, maintenance shops, craftsmen, security and operations); and (3) provide the budget to maintain plant reliability by implementing adequate preventive and corrective maintenance.

To assess these concerns, the team evaluated: (1) overtime records for operators and security officers; (2) human performance errors caused by excessive overtime, operator work arounds or poor turnovers; (3) open operator work arounds; (4) work requests and condition reports closed to track and trend and (5) a condition report that documented an unacceptable trend in dropped objects during Refueling Outage 1R19. Also, the team conducted formal interviews with an organizational cross-section of 42 site personnel including 22 security officers to assess their willingness to raise safety issues, use the corrective action program and use the employee concerns program. These interviews assessed whether conditions existed that would challenge the establishment of a safety-conscience work environment. The team also met with the Employee Concerns Coordinator and security personnel to discuss the plans for addressing the issues revealed by the 2006 Safety Culture survey and the August 2006 Wackenhut Security Culture survey.

(2) Assessment

The team concluded that the licensee established an acceptable and improving safety conscious work environment. Management implemented appropriate actions to address the redacted comments from the 2006 Safety Culture survey. The team verified that the

licensee had addressed concerns reflecting adverse conditions when appropriate. Since the 2006 Safety Culture and the August 2006 Wackenhut Security Culture survey, management had initiated hiring and training to increase the number of licensed operators, mechanical maintenance personnel and security officers. The licensee initiated Condition Report 1-2005-02773 to address the unacceptable trend in dropped objects during Refuel Outage 1R19. The licensee had communicated their view to security officers regarding a specific personnel action, which the security officers regarded as retaliation, when it was not.

The team assessed the visibility of the methods used to advertise the employee concerns program and found them to be acceptable.

From the interviews, the team concluded that personnel expressed their opinions that equipment problems were slow to be corrected, that personnel expressed opinions that some contractors would not raise concerns for fear of being fired, and that security officers continue to have a "wait and see attitude." Security officers viewed the use of family medical leave as retaliatory and others have the perception that declaring fatigue would result in an adverse action. Although there were some general culture issues identified, the team determined that licensee personnel had identified no specific examples related to maintaining a safety conscious work environment. However, the team concluded that these general culture factors could become worse and result in safety conscious work environment concerns.

4OA3 Event Followup

(Closed) Licensee Event Report 05000368/2006-001-00: Completion of a Plant Shutdown Required by Technical Specifications Due to a Loss of Motive Power to Certain Containment Isolation Valves as a Result of a Phase to Ground Short Circuit in a Motor Control Cubicle

Introduction. The team reviewed a Green self-revealing noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for failure of the licensee to take effective corrective action for an earlier event. This failure to ensure positive engagement of 480 volt circuit breakers resulted in a fire in Motor Control Center 2B-53.

Description. On October 30, 2006, an electrical fault occurred where the Containment Cooling Fan 2VSF-1A breaker stabs connected to the Motor Control Center 2B-53 vertical bus bars. This fault de-energized the motor control center and caused a small electrical fire in the affected bus bars. The loads that lost power included two containment coolers, an emergency diesel generator transfer pump, ventilation fans, and numerous safety-related motor operated valves. The de-energized motor-operated valves included the normally open reactor coolant pump cooling supply and return valves (Valves 2CV-5236-1 and 2CV-5255-1). Because these normally open containment isolation valves became inoperable, operators shut down Unit 2 to comply with Technical Specifications.

The licensee determined personnel improperly connected the Containment Cooling Fan 2VSF-1A breaker stabs onto the vertical bus bar on October 1, 2006, after conducting containment penetration overcurrent protective device testing and inspection

during Refueling Outage 2R18. Later that day, personnel re-energized Motor Control Center 2B-53 and operated Containment Cooling Fan 2VSF-1A with the breaker stabs improperly connected. Operators subsequently operated the containment cooling fan on October 4 and 5, 2006. On October 27, 2006, the licensee exited Refueling Outage 2R18. On October 30, 2006, at 7:22 am operators secured Containment Cooling Fan 2VSF-1A; later that day at 12:28 pm, when operators attempted to subsequently start the containment cooling fan, the fire occurred. From this, the team concluded that Unit 2 had operated at power for three days with the fault present and the potential for the fire to occur on any stop and restart of Containment Cooling Fan 2VSF-1A .

The licensee determined the fault resulted from one stab of Breaker K5 on the motor control center being improperly connected to its vertical bus bar. This condition resulted in a high resistance connection that caused the breaker spring clip to melt. The resulting conductive vapor created an arc path across the gap at the bottom of the vertical bus bars that melted the bottom section of the bus bars. An operator quickly extinguished the fire upon reporting to the motor control center.

The licensee generated Condition Report 2-2006-02444 to enter this condition in their corrective action program. During their review of this condition report, the licensee discovered that similar conditions occurred in 1991 and 2001. In 1991, a fire occurred in Motor Control Center 2B-64. The investigation determined that misaligned stabs of the turning gear motor breaker cubicle had high resistance connections that overheated when energized. This caused molten material to short the bus to ground. For corrective action, the licensee conducted one-time training with electricians emphasizing the need to use care when installing breaker cubicles and installed one piece safety barriers in motor control centers containing Size 4 starters, which consisted of only ten breakers. The corrective actions proposed a revision to the maintenance procedure to check the back of cubicles to assure breaker stabs were properly connected to the bus bars and that the clips were in good shape. The licensee had never implemented this corrective action.

In 2001, on Motor Control Center 2B-85, personnel discovered the center stab of one breaker in the breaker cubicle misaligned to one side of the bus bar. Further, personnel found part of the spring clip burned away and part of the bus bar damaged. This condition was identical to what was found after the October 2006 Motor Control Center 2B-53 fire. For corrective action, the licensee conducted training on proper insertion of a cubicle breaker into the motor control center and initiated a long-term action to perform a visual inspection of all Unit 2 motor control centers and their breakers. No reference was made as to how this plan was tracked so completion could not be verified.

The team concluded that, if the licensee had taken the proposed corrective actions after the fire in 1991 and the discovery of a misaligned clip in 2001, the fire in October 2006 would likely not have occurred.

Analysis. The performance deficiency resulted from licensee personnel failing to take adequate corrective actions (e.g. revising procedures to include appropriate guidance). The finding is greater than minor because it is associated with the mitigating systems

cornerstone attribute of protection against external factors and affects the associated cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The Phase 1 worksheets in Manual Chapter 0609, "Significance Determination Process," were used to conclude that a Phase 2 analysis was required because the initiating events, mitigating systems, and barrier integrity cornerstones were affected. The team performed a Phase 2 analysis using Appendix A, "Determining the Significance of Reactor Findings For At-Power Situations," of Manual Chapter 0609 and the Phase 2 worksheets for Arkansas Nuclear One.

The team determined the Motor Control Center 2B-53 remained unavailable for 3 days. The team consulted with a Region IV senior reactor analyst and had the following assumptions: (1) based on review of the Motor Control Center 2B-53 load list, the significance of the performance deficiency could be represented by failure of the Train A diesel generator fuel oil transfer pump and the Train A containment building cooling fans; (2) the Train A diesel generator fuel oil day tank provided 2 hours of fuel without the fuel oil transfer pump in service; and (3) the analyst credited recovery of the fuel oil supply function since the Train B fuel oil transfer pump could be cross-connected to provide fuel to the Train A diesel generator. The team and analyst determined the most significant core damage sequences involved a loss of offsite power. Within the loss of offsite power initiator worksheet, the most significant sequences involved a loss of offsite power for greater than 2 hours, with failure to recover the fuel oil supply from the Train B fuel oil transfer pump, failure of the turbine-driven emergency feedwater pump, and failure of the high pressure safety injection or containment spray pumps associated with the Train B diesel generator. From the Phase 2 analysis results, the team determined this finding had very low safety significance (Green). The team concluded the cause of the finding related to the crosscutting element of problem identification had no definitive cross-cutting aspects.

Enforcement. Part 50 of Title 10 of the Code of Federal Regulations, Appendix B, Criterion XVI, "Corrective Action," requires, in part, that measures be established to assure that significant conditions adverse to quality, are promptly identified, corrected, the cause determined and actions taken to prevent recurrence. Contrary to this, the licensee failed to take effective corrective actions to prevent recurrence of a significant condition adverse to quality, as revealed by a small fire that occurred on October 30, 2006, in Motor Control Center 2B-53 because of circuit breaker stab misalignment. Specifically, after a motor control center fire on February 23, 1991, and the discovery of a damaged bus bar on January 31, 2001, the licensee failed to assure that corrective actions were taken to prevent recurrence of significant condition adverse to quality. In each instance, the licensee took inadequate steps to ensure electricians would properly engage stabs for 480 volt circuit breakers with their bus bars. Because the finding is of very low safety significance and has been entered into the corrective action program as Condition Report 2-2006-02444, this violation is being treated as a noncited violation consistent with Section VI.A of the Enforcement Policy: NCV 05000368/2007007-01, Ineffective Corrective Actions Results in a Fire in Motor Control Center 2B-53.

40A5 Other Activities

The team and a senior reactor analyst reviewed the following item to ensure that the licensee included the item in the scope of their National Fire Protection Association (NFPA) Standard 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants," 2001 Edition, evaluations. The team evaluated interim compensatory measures and evaluated the risk assessments to determine if the licensee had demonstrated that the significance of the issue was less than high safety significance (Red). The team reviewed condition reports, design calculations, probabilistic risk evaluations, procedures and other plant documents.

(Closed) Apparent Violation 05000313/1998021-04: Inadequate alternate shutdown capability

Introduction. The team identified a violation of License Condition 2.C.(8) for failure to ensure the capability to implement Procedure 1203.002, "Alternate Shutdown." Specifically, the licensee did not protect the circuits of the motor-operated High Pressure Injection block valves used during alternate shutdown. However, the NRC is exercising discretion in accordance with the "NRC Interim Enforcement Policy Regarding Enforcement Discretion for Certain Fire Protection Issues" to refrain from taking any enforcement action to allow the licensee's transition to NFPA Standard 805 to address this violation.

Discussion. As documented in Inspection Report 05000313; 05000368/1998-021, the inspectors reviewed an engineering report and motor-operated valve calculations to address issues raised in NRC Information Notice 92-18, "Potential for Loss of Remote Shutdown Capability During a Control Room Fire," and survivability under stall thrust/torque conditions. The engineering report and calculations identified that many of the valves listed in the fire hazards analysis were susceptible to mechanical damage that could prevent manual operator action if a hot short resulted in spurious valve operation.

The engineering report concluded that operation of fire-related, safe shutdown equipment was not protected against the effect of hot shorts. Specifically, if a fire occurred in the control room or cable spreading room, hot shorts could cause all eight high pressure injection system block valves (CV-1219, CV-1220, CV-1227, CV-1228, CV-1278, CV-1279, CV-1284, and CV-1285) to spuriously close and to suffer mechanical damage, rendering them incapable of being reopened. Only one of the eight valves was necessary to perform the safety function required to achieve and maintain hot shutdown (i.e., provide reactor coolant makeup and maintain reactor coolant inventory). The licensee concluded that this was not a credible event and concluded that at least one valve would remain undamaged and available for use.

The licensee initiated Condition Report 1-1998-0721 to document its actions on this issue and implemented a compensatory hourly fire watch of the Unit 1 control room and cable spreading room on November 19, 1998. The inspector considered the implementation of the compensatory hourly fire watch an acceptable interim action.

As discussed in the letter dated January 12, 2000, from Arthur Howell to Randy Hutchinson, the NRC staff withdrew Noncited Violation 05000313/9821-01 and initiated Apparent Violation 05000313/9821-04 in accordance with Enforcement Guidance Memorandum 98-002, Revision 1, dated July 21, 1999. This action was taken to allow the industry and staff to resolve the questions raised by the industry related to fire-induced circuit failures and ensure the appropriate actions were taken. The NRC has now concluded, in accordance with the NRC Enforcement Policy, that this issue meets the requirements to be adequately resolved during the licensee's transition to NFPA Standard 805.

Analysis. The performance deficiency associated with this finding involved the failure to have an adequate alternate safe shutdown analysis and procedure in respond to a control room fire. This finding is greater than minor because it is associated with Mitigating Systems cornerstone attribute of protection from external factors (fire) and affects the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Manual Chapter 0609, "Significance Determination Process," Phase 1 worksheet, the finding was determined to have very low safety significance because it only affected the mitigating systems cornerstone, was not a design or qualification deficiency, did not represent a loss of a safety function, and did not affect seismic, flooding or severe weather initiating events. The finding would have had cross-cutting aspects related to problem identification and resolution, in that, personnel did not identify issues at a low threshold and in a timely manner commensurate with their safety significance; however, the finding occurred outside of the assessment period and does not reflect current performance.

Enforcement. Unit 1 License Condition 2.C.(8) specifies, in part, "EOI shall implement and maintain in effect all provisions of the approved Fire Protection Program as described in Appendix 9A to the SAR and as approved in the Safety Evaluation dated March 31, 1992." Appendix 9A, Section 9A.5 specifies the Fire Hazards Analysis is described in Appendix 9B, which further states the Fire Hazards Analysis, maintained under separate cover, is considered part of the Fire Protection Program described in Appendix 9A and as such is subject to the provisions of Arkansas Nuclear One Operating Licensing Condition 2.C.(8). The Fire Hazards Analysis, Revision 5 (dated July 7, 1998), Section 5.7.9, specified, "In the event a fire renders both trains of safe shutdown equipment inoperable from the control room/remote shutdown panel, alternate shutdown is required." Procedure 1203.002, "Alternate Shutdown," Revision 14, Step 3.8.7, specified actions for the shift superintendent and control room supervisor to open the high pressure injection block valves to maintain pressurizer level greater than 55 inches.

Contrary to the above requirements, the failure to protect the above valves against hot shorts and ensure they could be repositioned, as assumed in the analysis, could have resulted in a postulated hot short scenario rendering all eight high pressure injection system block valves incapable of being reopened, which in turn could have prevented the ability of the operators to safely shut down the facility.

Because the licensee committed to adopting NFPA Standard 805, "Performance Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants," and is changing their Fire Protection Program license basis to comply with 10 CFR 50.48.(c), this issue is covered by enforcement discretion in accordance with the NRC Enforcement Policy. Specifically, the licensee: (1) had entered this issue into their corrective action program (Condition Report C-2006-00048, Corrective Action 20, which tracks the resolution of Condition Report 1-1998-00721) and implemented appropriate compensatory measures, (2) demonstrated the deficiency was not associated with a finding that would be categorized under the Revised Oversight Process as Red or a Severity Level I violation, (3) had not acted willfully regarding the deficiency, and (4) had submitted the letter of intent prior to December 31, 2005. The team's review concluded that this violation meets the criteria for enforcement discretion for plants in transition to a risk-informed, performance-based fire protection program as allowed per 10 CFR Part 50.48(c). Since all the criteria were met, the NRC is exercising enforcement discretion for this issue.

4OA6 Exit Meeting

On April 3, 2007, the team presented their inspection results to Mr. T.G. Mitchell, Vice President Operations, and other members of his staff who acknowledged the findings. The team returned all proprietary and confidential information provided during the inspection.

4OA7 Licensee Identified Violations

The following violation of very low safety significance (Green) was identified by the licensee and was a violation of NRC requirements that met the criteria of Section IV of the NRC Enforcement Policy for being dispositioned as noncited violations.

Part 50 of Title 10 of the Code of Federal Regulations, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, that activities affecting quality shall be accomplished in accordance with prescribed procedures. Contrary to this, on August 24, 2006, personnel failed to close the above seat drain valves (2MS-2082A and 2MS-2082B) for the Unit 2 emergency feedwater pump turbine trip/throttle valve as prescribed in Instruction OPS-B9, "Unit Two Waste Control Log," Revision 5. The licensee identified this deficiency in Condition Report 2-2006-1229. This finding is of very low safety significance because the turbine-driven emergency feedwater pump remained inoperable for less than 12 hours.

Attachment: Supplemental Information

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

J. Browning, Manager, Unit 2 Operations
J. Eichenberger, Manager, Corrective Actions and Assessments
M. Higgins, Superintendent Plant Security
J. Hoffpauir, Manager, Maintenance
D. James, Manager, Licensing
J. Kowalewski, Director, Engineering
L. McCarty, Senior Engineer, Corrective Actions and Assessments
J. Miller, Manager, Systems Engineering
T. Mitchell, Vice President Operations
R. Roach, Project Manager, Wackenhut Corporation
R. Scheide, Licensing Specialist
F. VanBuskirk, Licensing Specialist

NRC

J. Clark, Chief, Projects Branch E
R. Deese, Senior Resident Inspector

LIST OF ITEMS OPENED AND CLOSED

Opened and Closed

05000368/2007007-01	NCV	Ineffective Corrective Actions Results in a Fire in Motor Control Center 2B-53 (Section 4OA3)
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Closed

05000368/2006-001-00	LER	Completion of a Plant Shutdown Required by Technical Specifications Due to a Loss of Motive Power to Certain Containment Isolation Valves as a Result of a Phase to Ground Short Circuit in a Motor Control Cubicle (Section 4OA3)
05000313/1998021-04	AV	Inadequate Alternate Shutdown Capability (Section 4OA5)

LIST OF DOCUMENTS REVIEWED

Procedures

COPD-020, "ANO Operations Concerns Program," Revision 7
COPD-024, "Risk Assessment Guidelines," Revision 19
ECP 1306.019, "Annual Emergency Cooling Pond Sounding," Change 009
EN-HU-101, "Human Performance Program," Revision 3
EN-LI-102, "Corrective Action Process," Revision 7
EN-LI-104, "Self-Assessment and Benchmark Process," Revision 2
EN-LI-118, "Root Cause Analysis Process," Revision 4
EN-LI-119, "Apparent Cause Evaluation (ACE) Process," Revision 3
EN-OE-100, "Operating Experience Program," Revision 2
EN-OP-103, "Reactivity Management Program," Revision 1
EN-OP-104, "Operability Determinations," Revision 1
EN-OP-111, "Operational Decision-Making Issue (ODMI) Process," Revision 1
OP-1015.001, "Conduct of Operations," Revision 59
OP-1015.003-B, "Unit 2 Operations Logs," Revision 52
OP-1032.037, "Inspection and Evaluation of Boric Acid Leaks," Revision 3
OP-1302.028, "Fuel Selection Criteria for Dry Storage," Change 009-01
OP-1302.031, "ANO-1 Ultrasonic Testing of Fuel Assemblies," Change 001-02
OP-1302.033, "ANO-1 Fuel Assembly Reconstitution," Change 002
OP-1504.002, "Control of Unit 1 Refueling," Revision 35
OP-1604.051, "Eberline Radiation Monitoring System," Revision 12
OP-1607.010, "Sampling of the ANO Unit 1 Vents," Revision 14
OP-1618.035, "Sampling/Analyzing Diesel Fuel Oil from Diesel Fuel Oil Transports," Chng 008
OP-2103.002, "Filling and Venting the Reactor Coolant System," Revision 44
OP-2104.002, "Chemical and Volume Control," Revision 45
OP-2104.006, "Fuel Pool Systems," Revision 27
OP-2104.033, "Containment Atmosphere Control," Revision 48
OP-2107.001, "Electrical System Operations," Revision 53
OP-2302.048, "Ultrasonic Testing of Fuel Assemblies," Change 005
OP-2302.049, "ANO-2 Fuel Assembly Reconstitution," Change 005
OP-2311.009E, "Unit-1 Pressurizer A-600 Butt Weld Inspections," Change 009
OP-2311.009J, "Unit-2 Pressurizer A-600 Upper Piping Visual Inspections," Change 009
OP-2311.009K, "Unit-2 Pressurizer A-600 Bottom Visual Inspections," Change 009
OP-2311.009N, "Unit-1 Pressurizer A-600 Small Bore Nozzle/Weld Inspections," Change 009
OP-2402.214, "Unit 2 N9000 Reactor Coolant Pump Shaft Seal Cartridge Removal," Revision 1
OP-3406.005, "Holtec Rail Car Hydraulic Jacking and Air Transporter Operation," Change 002

Drawings

Drawing C-65, "Emergency Cooling Reservoir," Revision 10
Document Revision Notice 05-2070, "Drawing C-65 Revision 10," dated August 12, 2005.

Engineering Requests

ER-ANO-1996-3555-081
ER-ANO-1997-4798-005
ER-ANO-2000-3333-075
ER-ANO-2004-0735-000
ER-ANO-2005-0108-000
ER-ANO-2005-0481-000
ER-ANO-2006-0109-000
ER-ANO-2006-0382-000

Boric Acid Evaluations

04-1-0452	05-1-0513	05-1-0514	05-1-0515	05-1-0516
05-1-0517	05-1-0518	05-1-0519	05-1-0520	05-2-0424

Work Orders

76681	25821	50260339
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Work Requests

85888	91765
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Condition Reports

C-2001-00492	C-2005-00563	C-2005-01643	C-2006-00308	C-2006-01534
C-2002-00302	C-2005-00817	C-2005-01720	C-2006-00396	C-2006-01668
C-2002-00340	C-2005-00940	C-2005-01733	C-2006-00474	C-2006-01678
C-2002-00525	C-2005-00943	C-2005-01734	C-2006-00489	C-2006-01747
C-2003-00067	C-2005-00975	C-2005-01735	C-2006-00555	C-2006-01770
C-2003-01043	C-2005-00999	C-2005-01748	C-2006-00616	C-2006-01781
C-2004-00230	C-2005-01060	C-2005-01845	C-2006-00646	C-2006-01786
C-2004-00302	C-2005-01082	C-2005-01856	C-2006-00661	C-2006-01787
C-2004-00633	C-2005-01097	C-2005-01932	C-2006-00732	C-2006-01788
C-2004-00642	C-2005-01205	C-2005-02013	C-2006-00909	C-2006-01789
C-2004-01691	C-2005-01206	C-2005-02071	C-2006-01016	C-2006-01794
C-2004-01696	C-2005-01229	C-2005-02081	C-2006-01038	C-2006-01861
C-2004-01791	C-2005-01237	C-2005-02269	C-2006-01043	C-2006-01895
C-2005-00015	C-2005-01238	C-2005-02338	C-2006-01083	C-2006-01908
C-2005-00058	C-2005-01595	C-2005-02360	C-2006-01089	C-2006-01931
C-2005-00178	C-2005-01604	C-2006-00067	C-2006-01219	C-2006-01955
C-2005-00385	C-2005-01610	C-2006-00132	C-2006-01236	C-2006-02044
C-2005-00396	C-2005-01625	C-2006-00159	C-2006-01474	C-2007-00061
C-2005-00397	C-2005-01628	C-2006-00306	C-2006-01495	

2-2002-00091	2-2002-01817	2-2005-00619	2-2006-00033	2-2006-01535
2-2002-00112	2-2002-01874	2-2005-00628	2-2006-00056	2-2006-01565
2-2002-00150	2-2003-01616	2-2005-00631	2-2006-00067	2-2006-01625
2-2002-00172	2-2003-01623	2-2005-00775	2-2006-00195	2-2006-01891
2-2002-00262	2-2003-01633	2-2005-01188	2-2006-00261	2-2006-02126
2-2002-00265	2-2004-00218	2-2005-01200	2-2006-00267	2-2006-02166
2-2002-00268	2-2004-00510	2-2005-01360	2-2006-00316	2-2006-02347
2-2002-00278	2-2004-00887	2-2005-01422	2-2006-00368	2-2006-02444
2-2002-00279	2-2004-01673	2-2005-01428	2-2006-00629	2-2006-02560
2-2002-00304	2-2004-01688	2-2005-01503	2-2006-00690	2-2006-02714
2-2002-00506	2-2004-01716	2-2005-02152	2-2006-00733	2-2007-00021
2-2002-00820	2-2005-00031	2-2005-02191	2-2006-00737	2-2007-00048
2-2002-01373	2-2005-00134	2-2005-02192	2-2006-00766	2-2007-00125
2-2002-01489	2-2005-00373	2-2005-02353	2-2006-00964	2-2007-00171
2-2002-01720	2-2005-00395	2-2005-02354	2-2006-01174	2-2007-00180
2-2002-01737	2-2005-00414	2-2005-02368	2-2006-01229	2-2007-00302
2-2002-01776	2-2005-00545	2-2005-02576	2-2006-01464	

1-2002-00034	1-2003-00346	1-2004-02356	1-2005-01599	1-2006-00208
1-2002-00074	1-2003-00369	1-2004-02429	1-2005-01710	1-2006-00236
1-2002-00469	1-2003-00479	1-2005-00118	1-2005-01714	1-2006-00348
1-2002-00474	1-2003-00852	1-2005-00155	1-2005-01932	1-2006-00413
1-2002-00481	1-2004-00547	1-2005-00629	1-2005-02237	1-2006-00473
1-2002-00619	1-2004-00980	1-2005-00635	1-2005-02337	1-2006-00497
1-2002-00629	1-2004-00989	1-2005-00678	1-2005-02566	1-2006-00548
1-2002-00706	1-2004-01279	1-2005-00723	1-2005-02628	1-2006-00553
1-2002-00855	1-2004-01337	1-2005-00954	1-2005-02976	1-2006-00574
1-2002-00924	1-2004-01366	1-2005-01004	1-2005-02981	1-2006-00607
1-2002-00946	1-2004-01402	1-2005-01158	1-2005-03035	1-2006-00668
1-2002-01300	1-2004-01522	1-2005-01212	1-2005-03075	1-2006-00763
1-2002-01310	1-2004-01544	1-2005-01226	1-2006-00036	1-2006-00819
1-2002-01544	1-2004-01660	1-2005-01251	1-2006-00043	1-2006-00850
1-2002-01549	1-2004-01663	1-2005-01252	1-2006-00061	1-2006-00891
1-2002-01554	1-2004-01705	1-2005-01257	1-2006-00090	1-2006-00940
1-2002-01564	1-2004-01915	1-2005-01282	1-2006-00117	1-2006-00971
1-2002-01689	1-2004-02208	1-2005-01434	1-2006-00140	1-2006-00997
1-2002-01776	1-2004-02249	1-2005-01519	1-2006-00156	1-2006-01122
1-2003-00337	1-2004-02334	1-2005-01564	1-2006-00182	1-2006-01154

Operating Experience

OPX-2005-0034	OPX-2005-0063	OPX -2005-0078	OPX-2005-0093	OPX-2005-0100
OPX-2005-0141	OPX-2005-0207	OPX-2005-0311	OPX-2006-0078	OPX-2006-0250
OPX-2006-0303	OPX-2006-0314	OPX-2006-0393	OPX-2006-0400	

Audits and Surveillances

QA-3-2005-ENS-1, "Quality Assurance Multi-Site Audit of the Corrective Action Program"
QA-8-2005-ENS-1, "Quality Assurance Multi-Site Audit of Engineering Programs"
QA-7-2006-ANO-1, "Emergency Planning"
QA-10-2006-ANO-1, "Maintenance"
QA-18-2006-ANO-1, "Technical Specifications"
QS-2006-ANO-002, "QA Follow-up Review of the ANO Fire Protection Improvement Plan"
QS-2006-ANO-007, "2R18 Radiation Protection Outage Planning Review"

Self-Assessments

LO-ALO-2004-0060, "RCS System Health Plan"
LO-ALO-2005-0023, "Failure Mode Analysis Category B Tool Reviews for System Engineering"
LO-ALO-2005-0032, "Benchmark Fire Protection Condition Reports Initiated"
LO-ALO-2005-0042, "Arkansas Nuclear One - Corporate Safety Culture Assessment"
LO-ALO-2005-0088, "Circuit Failures Self-Assessment"
LO-ALO-2006-0002, "CA&A Effectiveness Reviews"
LO-ALO-2006-0036, "Fuel Reliability"
LO-ELO-2005-0011, "Fleet Safety Culture"
LO-ELO-2005-0138, "Fuel Reliability Action Plan"
LO-ELO-2006-0050, "Fleet Operating Experience"

Safety Conscious Work Environment

NRC Regulatory Issue Summary 2005-18, "Guidance for Establishing and Maintaining a Safety Conscious Work Environment," dated August 25, 2005

NRC Regulatory Issue Summary 2006-13, "Information on the Changes Made to the Reactor Oversight Process to More Fully Address Safety Culture," dated July 31, 2006

Understanding SCWE - A Handbook on Safety Conscious Work Environment

2006 Safety Culture Survey

2006 Nuclear Safety Culture Assessment Action Plan

Employee Concerns Program Update Training for employees and supervisors

Employee Concerns Program Newsletter, dated December 2006

Numerous memorandums referred to in the Wackenhut Nuclear Services Action Plan.

Security Officer Culture Survey Results

Shift Roster and e-mail that mis-communicated the policy on declaring fatigue.

Security individual and group work hours from November 2006 through January 2007

Procedure EN-EC-100, "Guidelines for Implementation of the Employee Concerns Program," Revision 1

Procedure EN-NS-206, "Security Work Hour Controls," Revision 1

Policy EN-PL-100, "Nuclear Safety and Management Expectations," Revision 0

Policy EN-PL-187, "Safety Conscious Work Environment (SCWE) Policy," Revision 0

Policy EN-PL-190, "Maintaining a Strong Safety Culture," Revision 0

Collective Bargaining Agreement between Wackenhut and the ANO security officers union, including the Overtime Distribution and Scheduling Policy, dated April 2, 1998

Learning Program LP-33, "Sleep and Shift Work Adjustment," dated July 2000

Condition Report C-2006-00883

Assessment LO-ALO-2006-00091

Investigation Report EAS-2006-0563

Wackenhut Procedures:

107, "Attendance," Revision 3

108, "Progressive Discipline," Revision 2

113, "Safe-2-Say®Program," Revision 3

114, "Open Door Policy," Revision 1

Miscellaneous

OP-2307.008, "U2 Containment Penetration Overcurrent Protection Device Testing," Revision 17

OP-2307.022, "Unit 2 Containment Penetration Conductor Overcurrent Protection Device Inspection," Revision 10

ANSI N18.7/ANS 3.2-1976, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants"

Engineering Report E-NE-2005-006, "Fuel Performance Improvement Plan," Revision 1

NRC Information Notice 2006-02, "New Ultra-Low-Sulfur Diesel Fuel Oil Could Adversely Impact Diesel Engine Performance"

Calendar Year 2005 and 2006 condition report performance trend graphs

1st Quarter 2005 through 3rd Quarter 2006 ANO Quarterly Trend Reports

Various Condition Review Group and Condition Review Group screening meetings while onsite

February 7, 2007 Self Assessment Review Board package

Unit 1 and Unit 2 Individual work hours for CY 2004, 2005, and 2006.

IR19 and 2R18 deferred modification lists

Active Operator Work Around Lists for Units 1 and 2 - February 2007

TEAR-ANO-2005-0513

Information Request
November 15, 2006
Arkansas Nuclear One Problem Identification and Resolution Inspection
(IP 71152; Inspection Report 05000313; 368/2007-07)

The inspection will cover the period of January 2005 to January 2007. All requested information should be limited to this period unless otherwise specified. As agreed when announcing the inspection, please provide the information on two CDs to Greg Pick at the Region IV office by **December 11, 2006**.

Some information, depending on the size of the file, may be provided by e-mail. Information provided in electronic media may be in the form of e-mail attachment(s), CDs, or thumb drives. The agency's text editing software is Corel WordPerfect 10, Presentations, and Quattro Pro; however, we have document viewing capability for MS Word, Excel, Power Point, and Adobe Acrobat (.pdf) text files.

The team will get updated lists et cetera during the first day onsite (January 22, 2007).

Note: On **summary lists** please include a description of problem, status, initiating date, and owner organization.

1. Summary list of all Condition Reports (CR) of significant conditions adverse to quality opened or closed since 1/1/2005
2. Summary list of all CRs that were generated since 1/1/2005
3. A list of all corrective action documents that aggregate or "roll-up" one or more smaller issues for the period
4. Summary list of all condition reports that were down-graded or up-graded in significance since 1/1/2005
5. List of all root cause analyses completed since 1/1/2005
6. List of root cause analyses planned, but not complete at end of the period
7. List of all apparent cause analyses completed since 1/1/2005
8. List of plant safety issues raised or addressed by the employee concerns program since 1/1/2005
9. List of action items generated or addressed by the plant safety review committees since 1/1/2005
10. All quality assurance audits and surveillances and/or assessments of corrective action activities completed since 1/1/2005
11. A list of all quality assurance audits and surveillances completed since 1/1/2005, include any audits or surveillances scheduled but which were not completed

12. All corrective action activity reports, functional area self-assessments, and non-NRC third party assessments completed since 1/1/2005
13. Corrective action performance trending/tracking information generated since 1/1/2005 and broken down by functional organization
14. Current revisions of corrective action program procedures for: Condition Reporting, Corrective Action Program, Root Cause Evaluation/Determination, Operator Work Arouns, Work Requests, Requests for Engineering Assistance, Temporary Modifications, Procedure Change Requests, Deficiency Reporting and Resolution, Operating Experience Evaluation
15. A listing of all external events (OE) evaluated for applicability at Arkansas Nuclear One since 1/1/2005
16. Condition reports or other actions generated since 1/1/2005 for each of the items below:
 - (1) Part 21 Reports:
 - (2) [Applicable] NRC Information Notices:
 - (3) All LERs issued by Arkansas Nuclear One
 - (4) NCVs and Violations issued to Arkansas Nuclear One (including licensee identified)
- (17) Safeguards event logs for the period
- (18) Radiation protection event logs
- (19) Current system health reports or similar information for the emergency diesel generator and/or 4 kV systems for each unit
- (20) Current predictive performance summary reports or similar information
- (21) Corrective action effectiveness review reports generated since 1/1/2005
- (22) Summary list of condition reports separated by unit and systems for the emergency diesel generator and 4 kV systems (risk significant system selection)
- (23) Information relative to any efforts related to a plant improvement program or human performance improvement program. since the last PIR inspection