



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

April 6, 2001

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

**SUBJECT: ARKANSAS NUCLEAR ONE, UNITS 1 AND 2 - NRC INSPECTION
REPORT 50-313/01-05; 50-368/01-05**

Dear Mr. Anderson:

On March 20, 2001, the NRC completed an inspection at your Arkansas Nuclear One, Units 1 and 2. The preliminary results of the onsite inspection were discussed on March 8, 2001, with you and members of your staff. The enclosed report documents the inspection findings, which were discussed on March 20, 2001, with you and members of your staff during a telephonic exit meeting conducted to inform you of the results of the in-office review following the team's departure from the site.

This inspection examined activities conducted under your license as they relate to the identification and resolution of problems, safety and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection, the NRC has determined that one violation of NRC requirements occurred. This violation is being treated as a noncited violation, consistent with Section VI.A of the Enforcement Policy. This noncited violation is described in the subject inspection report. If you contest the violation or significance of this noncited violation, 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; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Arkansas Nuclear One, Units 1 and 2 facility.

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/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Anthony T. Gody, Chief
Operations Branch
Division of Reactor Safety

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

Enclosure:
NRC Inspection Report
50-313/01-05; 50-368/01-05

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-3-

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 Section Chief, DRP/TSS (**PHH**)
 RITS Coordinator (**NBH**)
 Scott Morris (**SAM1**)
 NRR Event Tracking System (**IPAS**)
 ANO Site Secretary (**VLH**)

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Dockets: 50-313; 50-368
Licenses: DPR-51; NPF-6
Report No.: 50-313/01-05; 50-368/01-05
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 5-20, 2001
Inspectors: S. McCrory, Senior Operations Engineer, Operations Branch
P. Gage, Senior Operations Engineer, Operations Branch
L. Willoughby, Project Engineer, Project Branch D
J. Melfi, Project Engineer, Project Branch E
K. Weaver, Resident Inspector, Project Branch D
Approved By: A. Gody, Chief, Operations Branch
Division of Reactor Safety
Attachment Supplemental Information

SUMMARY OF FINDINGS

Arkansas Nuclear One, Units 1 and 2
NRC Inspection Report 50-313/01-05; 50-368/01-05

IR 05000313-01-05; 05000368-01-05, on 3/5-20/2001, Entergy Operations, Inc., Arkansas Nuclear One Identification and Resolution of Problems.

The inspection was conducted by two regional senior operations engineers, two regional project engineers, and one resident inspector. The inspection identified one issue having very low safety significance (no color). The significance of most findings is indicated by their color (Green, White, Yellow, Red) using IMC 0609 "Significance Determination Process" (SDP). The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at <http://www.nrc.gov/NRR/OVERSIGHT/index.html>. Findings to which the SDP does not apply are indicated by "No Color" or by the severity level of the applicable violation.

Identification and Resolution of Problems

The licensee adequately identified problems and put them into the corrective action program. However, there was one instance in which the licensee did not recognize that the total exposure of Arkansas Nuclear One radiation workers who were also licensed as radiographers was not being recorded in accordance with regulatory requirements. The licensee adequately used risk in prioritizing the extent to which individual problems would be evaluated and in establishing schedules for implementation of corrective actions. Licensee audits and assessments critically assessed the licensee's problem identification and resolution activity and identified needs for improvement in a number of areas including root cause evaluation, timely condition report initiation, and condition report backlogs. During inspection interviews, workers at the site expressed no reservations to input safety issues into the problem identification and resolution program. The licensee generally implemented corrective actions in a timely manner. The licensee implemented effective corrective actions to prevent recurrence of significant conditions adverse to quality.

Cornerstone: Occupational Radiation Safety

No Color. The licensee had no process to track the total exposure of Arkansas Nuclear One radiation workers, who were also licensed as radiographers as required by 10 CFR 20.2104(a). This violation of 10 CFR 20.2104(a) is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation was entered into the licensee's corrective action program as Condition Report CR-ANO-C-2001-0102.

The significance of this noncited violation was determined to be more than minor because the failure to track the total exposure of radiation workers could lead to an overexposure which is a credible impact on safety. However, this issue did not affect the cornerstone since there were no over exposures or substantial potential for an over exposure to occur and the ability to assess dose was not comprised.

Report Details

2. RADIATION SAFETY

Occupational Radiation Safety (OS)

2OS1 Access Control to Radiological Significant Areas

a. Inspection Scope

The inspectors reviewed the licensee's response to NRC Information Notice 2000-15. This information notice addressed several events in which radiographers received occupational whole body doses in excess of the 5 rem total effective dose equivalent limit in 10 CFR 20.1201(a)(1).

b. Findings

The inspectors observed that Arkansas Nuclear One employed a number of individuals as radiation workers who also performed radiography under a license issued by the State of Arkansas to the Arkansas Nuclear One facility. These individuals were assigned to the Arkansas Nuclear One non-destructive examination group and routinely performed various quality assurance functions as qualified radiation workers when not performing radiography. The Arkansas Nuclear One radiography license limited these individuals to performing radiography only on Arkansas Nuclear One property. However, the licensee did not require that radiography performed outside of the radiologically controlled areas of the site be controlled by a radiation work permit.

The inspectors reviewed the exposure tracking record systems for these individuals. The inspectors determined that the licensee maintained a separate radiation exposure history tracking system to support the radiography licenses in addition to the radiation protection organization's radiation exposure history tracking system. The licensee tracked all the exposure history related to radiography in the non-destructive examination organization system and all exposure history related to radiation worker exposure at Arkansas Nuclear One or other nuclear sites in the radiation protection system. However, the licensee did not track total exposure history in either system. The inspectors reviewed the radiation protection records and determined that no radiographer had exceeded or approached the occupational exposure limit specified in 10 CFR 20.1201(a)(1)(I).

The regulations, 10 CFR 20.2104(a), state that for each individual who is likely to receive in a year, an occupational dose requiring monitoring pursuant to 20.1502 the licensee shall — "Determine the occupational radiation dose received during the current year; and attempt to obtain the records of the cumulative occupational radiation dose." Contrary to the above, the licensee did not determine the cumulative occupational radiation dose received by Arkansas Nuclear One radiographers within a system of records as required by 10 CFR 20.2104(a). Specifically, the licensee did not record

dose received as a result of radiography performed outside a radiologically controlled areas of the site in the system of records required by 10 CFR 20.2104(a). This violation is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation was entered into the licensee's corrective action program as Condition Report CR-ANO-C-2001-0102. (50-313; 368/0105-01)

This issue was characterized as "no color" using the Thresholds for Documentation Process of NRC Manual Chapters 0609, "Significance Determination Process," and 0610*, "Power Reactor Inspection Reports." The inspectors assessed the condition as more than "minor" by concluding that the issue had a credible impact on occupational radiation safety. The inspectors further determined that the condition did not affect the cornerstone because there were no overexposure or substantial potential for an overexposure to occur and the ability to assess dose was not compromised. However, the inspectors concluded that the condition was a violation of regulatory requirements.

4. OTHER ACTIVITIES (OA)

4OA2 Identification and Resolution of Problems

a. Effectiveness of Problem Identification

(1) Inspection Scope

The inspectors reviewed items selected across the seven cornerstones to determine if problems were being properly identified, characterized, and entered into the corrective action program for evaluation and resolution. Specifically, the inspectors selected approximately 120 condition reports (which included the licensee response to 11 NRC information notices and Part 21 reports) and approximately 24 licensee self-assessments and audits, which had been issued between March 1, 2000, and March 1, 2001.

The inspectors evaluated the condition reports to determine the licensee's threshold for identifying problems and entering them into the corrective action program. The inspectors reviewed licensee self-assessments and audits and evaluated their effectiveness by comparing the results against self-revealing and NRC-identified issues. Also, the licensee's efforts in establishing the scope of problems were evaluated by reviewing pertinent operational logs, work orders, audit and self-assessment results, action plans, and results from surveillance tests and preventive maintenance tasks. The condition reports and other documents listed in Attachment 1 to this report were used to facilitate the review.

(2) Issues and Findings

The inspectors determined that the licensee adequately identified problems and entered them into the corrective action program. This was evidenced by the relatively few deficiencies identified by external organizations (including the NRC) that had not been previously identified by the licensee during the review period. Licensee audits and

assessments sampled an appropriate breadth and depth and identified issues similar to those that were self-revealing or raised during previous NRC inspections. The inspectors independently observed a number of corrective action performance areas that a recent Entergy Operations, Inc., corporate assessment had identified as areas for improvement. The areas for improvement included timeliness of condition report initiation, numbers of old (greater than 2 years) condition reports, and quality of root cause evaluations.

The inspectors did not observe any instances in which conditions adverse to quality were being handled outside the corrective action program. However, the inspectors identified a condition adverse to quality previously unrecognized by the licensee. The inspectors identified that the licensee failed to maintain a complete radiation exposure history as required by 10 CFR 20.2104(a) for radiation workers who also performed radiography on site. (See Section 20S1 above.) The inspectors concluded that there were no findings regarding the licensee performance in identification of problems.

b. Prioritization and Evaluation of Issues

(1) Inspection Scope

The inspectors reviewed approximately 120 condition reports, and supporting documentation, including root cause evaluations, to ascertain whether the licensee identified and considered the full extent of conditions, generic implications, common causes, and previous occurrences. In addition, the inspectors reviewed the licensee's evaluation of selected industry experience information, including operating event reports and NRC and vendor generic notices, to assess if issues applicable to the Arkansas Nuclear One facility were appropriately addressed. Specific items reviewed are listed in Attachment 1 to this report.

(2) Issues and Findings

Based on a review of the licensee's records, the inspectors concluded that the licensee effectively prioritized and evaluated issues. The inspectors identified no findings related to prioritization and evaluation of issues. The licensee appropriately characterized and evaluated issues that were significant conditions adverse to quality.

c. Effectiveness of Corrective Actions

(1) Inspection Scope

The inspectors reviewed condition reports, audits and self-assessments to verify that corrective actions relating to the issues were identified and implemented in a timely manner commensurate with safety, including corrective actions to address common cause or generic concerns. The inspectors also conducted walkdowns and interviewed plant personnel to independently verify and assess the effectiveness of corrective actions implemented by the licensee. The inspectors included the following specific focus areas within the scope of this review:

- Unit 1 - both trains of low pressure injection/decay heat removal inoperable
- Unit 1 - power oscillations from main turbine control problems
- Unit 2 - high pressure safety injection hot leg injection check valve leakage
- Unit 2 - recurring loose set screw for emergency diesel generator air inlet damper
- Unit 2 - main turbine high vibration causing turbine trip
- Unit 2 - low pressure safety injection motor-operated valve failing to stroke open
- Unit 2 - main feedwater pump failures
- Unit 2 - steam generator rigging issues

A listing of specific documents reviewed during the inspection is included as Attachment 1 to this report.

(2) Issues and Findings

Based on a review of the licensee's documents and interviews with licensee personnel, the inspectors concluded that the licensee effectively implemented corrective actions commensurate with safety. The inspectors identified no findings related to the effectiveness of corrective actions.

d. Assessment of Safety Conscious Work Environment

(1) Inspection Scope

The inspectors interviewed approximately 30 individuals from the licensee's staff, which represented a cross-section of functional organizations and supervisory and non-supervisory personnel. These interviews assessed whether conditions existed that would challenge the establishment of a safety conscious work environment.

(2) Issues and Findings

Based on interviews, the inspectors identified no findings related to the safety conscious work environment. The inspectors concluded, based on information collected from these interviews, that employees were willing to identify safety issues and enter them into a corrective action system.

40A3 Event Follow-up

a. Inspection Scope

The inspectors reviewed the following Licensee Event Reports (LERs) in accordance with the Significance Determination Process, relevant sections of the Final Safety Analysis Report, and the associated condition reports to assess the safety significance of the LERs and the adequacy of the licensee's corrective actions.

b. Findings

(Closed) LER 50-368/2000-003, Revision 0: "Refueling Machine Overload cut-off limits not set as required by Technical Specifications." The license identified this issue during design basis verification efforts. The magnitude of the discrepancy between the required and actual cut off values would not be expected to result in significant damage to the internals if inadvertent engagement had occurred. The inspectors concluded that this was a minor issue that was not subject to enforcement. It is in the licensee's corrective action program as Condition Report CR-ANO-2-2000-0945.

(Closed) LER 50-313/2000-005, Revision 0: "Deficient Reactor Protection System Surveillance Tests due to Inadequate Procedure Verification Resulted in Operation Prohibited by Technical Specifications." The license identified this issue during design basis verification efforts. The reactor coolant system total flow amplifier was technically inoperable because surveillances were not performed at the required frequency. However, in subsequent test results the flow amplifiers were found to be within operability limits. The inspectors concluded that this was a minor issue that was not subject to enforcement. It is in the licensee's corrective action program as Condition Report CR-ANO-1-2000-0416.

(Closed) LER 50-313/2000-002, Revision 1: "Inoperable Low Pressure Injection/Decay Heat Removal Pumps." This event was discussed in NRC Inspection Report 50-313/00-09, which characterized the issue as a Severity Level III Violation of Criterion III of Appendix B to 10 CFR Part 50. No new issues were revealed by the licensee event report and review. This issue is in the licensee's corrective action program as Condition Report CR-ANO-1-2000-0068.

(Closed) LER 50-313/2000-004, Revision 0: "Manual Reactor Trip in Response to Rapid Closure of Main Turbine Steam Supply Valves." This event was discussed in NRC Inspection Report 50-313/00-03. The report characterized the plant response as typical for a reactor trip with minor complications and the licensee's performance in response to the trip as acceptable. The licensee determined the cause of the event to be a stuck contact on the valve position limit lower pushbutton switch. The licensee replaced and test the switch satisfactorily. The inspectors determined that this event was of minimal safety significance because all safety related equipment operated as designed following the manual reactor trip and the plant was safely taken to hot shutdown conditions. This issue is in the licensee's corrective action program as Condition Report CR-ANO-1-2000-0165.

40A6 Meetings, including Exit

The inspectors debriefed Mr. Craig G. Anderson, Vice President, Operations, and members of the licensee's staff on the preliminary inspection findings near the conclusion of the onsite inspection on March 8, 2001. The licensee's management acknowledged the findings presented.

A telephonic exit meeting was held on March 20, 2001, with Mr. Craig G. Anderson, Vice President, Operations, and other licensee staff members, during which the lead inspector characterized the results of the in-office review following the inspectors's departure from the site.

The inspectors asked the licensee's management whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

ATTACHMENT

PARTIAL LIST OF PERSONS CONTACTED

Licensee

G. Anderson, Vice President, Arkansas Nuclear One
R. Beard, Unit 2 Electrical Maintenance Superintendent
E. Blackard, Design Engineering
L. Bramlett, Unit 2 System Engineering
R. Byford, Plant Staff
R. Carter, Assistant Manager, Unit 2 Operations
M. Cooper, Licensing Specialist
P. Crossland, Unit 1 System Engineering
D. Dean, Plant Staff
C. Fite, Nuclear Safety Assurance, Corrective Action & Assessment Manager
A. Hartman, Plant Staff
M. Ginsberg, Plant Staff
M. Higgins, Plant Staff
M. Huff, Design Engineer
D. James, Manager, Licensing
T. Marschall, Plant Staff
T. Mayfield, Supervisor, Unit 2 Training
J. McWilliams, Steam Generator Replacement Project
K. Nickols, Unit 1 System Engineering
D. Phillips, Supervisor, System Engineering
J. Priore, System Engineer
S. Pyle, Licensing Specialist
T. Rolniak, Plant Staff
M. Ruder, Nuclear Safety Assurance, Corrective Action & Assessment Manager
J. Selva, Unit 1 Operations
C. Sesny, Unit 2 System Engineering
M. Smith, Manager, Engineering Programs and Components
G. Sullins, Component Engineering
C. Tyrone, Plant Staff
J. Vandergrift, Director, Nuclear Safety
D. Wagner, Supervisor, Quality Assurance
W. Walker, Plant Staff
H. Williams, Manager, Security
D. Wiseman, Unit 1 System Engineering

ITEMS OPENED AND CLOSED

Opened and Closed

50-313; 368/0105-01 NCV Failure to maintain complete radiation exposure history records for Arkansas Nuclear One radiographers in the system required by 10 CFR 20.2104(a) (Section 2OS1)

Closed

50-368/2000-03-00 LER Refueling Machine Overload cut-off limits no set as required by Technical Specifications. (Section 4OA3)

50-313/2000-05-00 LER Deficient Reactor Protection System Surveillance Tests due to Inadequate Procedure Verification Resulted in Operation Prohibited by Technical Specifications. (Section 4OA3)

50-313/2000-02-01 LER Inoperable Low Pressure Injection / Decay Heat Removal pumps (Section 4OA3).

50-313/2000-04-00 LER Manual Reactor Trip in Response to Rapid Closure of Main Turbine Steam Supply Valves (Section 4OA3).

PARTIAL LIST OF DOCUMENTS REVIEWED

The following documents were selected and reviewed by the inspectors to accomplish the objectives and scope of the inspection and to support any findings:

Procedures

1402.010, "Unit 1 Primary Make up Pumps (P-36 A,B,C) Inspection/Repair," revision 13

1000.104, "Condition Reporting," Revision 17

LI-104, "Assessment Process," Revision 0

LI-102, "Corrective Action Process" Revision 0

NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 0

1000.153, "Engineering Request Process," Revision 5

PS-100, "Outage and Work Management," Revision 0

100.104, "Condition Reporting," Revision 17

LI-104, "Assessment Process," Revision 0

LI-102, "Corrective Action Process," Revision 0

OSP-014, "Power Availability Requirements for Arkansas Nuclear One," 06/15/94

2107.001, "Unit 2 Electrical System Operations procedure," Revision 44

1107.001, "Unit 1 Electrical System Operations procedure," Revision 57

Condition Reports

1-1995-0398	2-1997-0508	1-1999-0566	2-2000-0225	C-2000-0311
1-1995-0615	C-1997-0046	2-1999-0011	2-2000-0260	C-2000-0321
1-1996-0034	C-1997-0145	2-1999-0380	2-2000-0261	C-2000-0374
1-1996-0272	C-1997-0231	2-1999-0425	2-2000-0270	C-2000-0378
1-1996-0346	C-1997-0246	2-1999-0433	2-2000-0273	1-2001-0009
1-1996-0364	1-1998-0230	2-1999-0525	2-2000-0292	1-2001-0142
1-1996-0567	1-1998-0251	2-1999-0581	2-2000-0293	2-2001-0017
2-1996-0097	1-1998-0337	2-1999-0750	2-2000-0411	2-2001-0025
2-1996-0112	1-1998-0620	2-1999-0769	2-2000-0432	2-2001-0043
2-1996-0293	1-1998-0695	C-1999-0009	2-2000-0587	2-2001-0058
C-1996-0210	C-1998-0081	C-1999-0044	2-2000-0712	C-2001-0004
C-1996-0245	C-1998-0211	C-1999-0134	2-2000-0945	C-2001-0008
C-1996-0278	1-1999-0016	C-1999-0238	2-2000-1051	C-2001-0102
1-1997-0112	1-1999-0178	C-1999-0250	C-2000-0013	OEE-00-2172
1-1997-0136	1-1999-0186	1-2000-0068	C-2000-0024	OPX-2000-0010
1-1997-0295	1-1999-0209	1-2000-0095	C-2000-0080	OPX-2000-0012
1-1997-0296	1-1999-0243	1-2000-0129	C-2000-0081	OPX-2000-0014
2-1997-0043	1-1999-0247	1-2000-0144	C-2000-0088	OPX-2000-0038
2-1997-0152	1-1999-0278	1-2000-0161	C-2000-0159	OPX-2000-014
2-1997-0168	1-1999-0341	1-2000-0162	C-2000-0160	
2-1997-0208	1-1999-0348	1-2000-0165	C-2000-0200	
2-1997-0280	1-1999-0354	1-2000-0172	C-2000-0207	
2-1997-0304	1-1999-0390	1-2000-0416	C-2000-0282	
2-1997-0435	1-1999-0422	2-2000-0054	C-2000-0283	

Self-Assessments and Audits

System Engineering Performance Monitoring, 5/12/00

Temporary Alteration Program, 11/1/99 - 10/1/00

Scheduling / Work Management, 4/14/00

Work Incomplete and Deficiency Tags, 3/28/00

SR-005-2000, "Access Record Discrepancies," 2/21/00

SR-048-99, "Security Call-Out Testing," 11/3/99

SR-011-2000, "Security Call-Out Testing," 3/15/00

OP-2000-02-ANO "Operations Self Assessment on Configuration Control" 11/17/00

OP-2000-04-ANO "Unit 1 Operations 4th Quarter 2000 Focus Area Assessment Report" 8/00

OP-2000-01-ANO, "EOI Peers to evaluate potential problem areas within the operations departments at ANO" 3/6-10/00

OP-2000-03-ANO, "Self Check/Peer Check" 12/5-8/00

OP-2001-01-ANO, "Briefings and Procedure in Hand/Placekeeping by Operations Department" 01/2-5/01

Arkansas Nuclear One Learning Organization Assessment, 2/28/01

Quality Assurance Audits/Surveillances

NQ-2000-0043 QA Audit Report QAP-10-2000 Corrective Actions Audit, 3/7/00

NQ-2000-0095 QA Surveillance Report QS-2000-ANO-022 CR-C-99-0240 Follow-up, 6/26/00

NQ-2000-0130 Quality Assurance Audit Report QAP-10A-2000 Corrective Action, 8/23/00

NQ-2000-0101 QA Surveillance Report QS-2000-ANO-026 W-3 Security Follow-up, 7/3/00

NQ-2000-0033 QA Surveillance SR-005-2000 Access Records Discrepancies, 2/21/00

NQ-2000-0045 QA Surveillance SR-011-2000 Call-Out Testing, 3/16/00

NQ-2000-0046 QA Surveillance Report SR-004-2000 CR-ANO-C-99-0240 Follow-up, 3/23/00

NQ-2000-0129 QA Surveillance Report QS-2000-ANO-030 Protective Tagging, 8/28/00

NQ-2000-0140 QA Surveillance Report QS-2000-ANO-031 Document Control/Records Management, 8/30/00

NQ-2000-0186 QA Surveillance Report QS-2000-ANO-053 CR-C-99-0240 Follow-up, 10/16/00

Maintenance Action Items (MAI)

5890 Control Room alarm when emergency diesel generator exhaust fans running, need to adjust damper limit switches

8963 Damper 2TCD-8692-2 will not open far enough to actuate limit switches

19047 Damper 2TCD-8692-2 is slow to open. Investigation reveals operator shafts are bent and need to be replaced.

12696 P36A Makeup Pump Repair

12698 CV-1207. "Seal Injection Control Valve Repair

Temporary Alterations

TAP # 00-1-008	P-34B Decay Heat inboard bearing cooling valve	3/2/00
TAP # 00-1-007	P-34A Decay Heat inboard bearing cooling valve	3/2/00

Licensee Event Reports

50-313/2000-004-00, "Manual Reactor Trip Initiated in response to the rapid closure of the main turbine steam supply valves"

50-313/2001-001-00, "Manual reactor trip due to excessive main generator hydrogen leakage caused by a failed generator vent line"

50-313/2000-005, "Omission in the RPS channel 18 month calibrations does not test the RCS total flow scaled output"

50-368/2000-003, "Refueling Bridge underloads received due to incorrect value of dummy weight assembly during calibration"

50-368/2000-00, "Pressurizer Heater Sleeves and a RCS Hot Let Resistance Detector Nozzle Weld leaking due to PWSCC"

50-313/00-02-00/01, "Inoperable Low Pressure Injection / Decay Heat Removal pumps"

Other Documents

Security Incident Report Log, March, 00 - December, 00
CA & A's Deskguide and Process Flows, Jan 3, 2001

Information Request 1

Arkansas Nuclear One PIR Inspection (IP 71152) 01-05

The inspection will cover the period of 3/1/00 to 3/1/01. All requested information should be limited to this period unless otherwise specified. The information may be provided in either electronic or paper media or a combination of these. Information provided in electronic media may be in the form of e-mail attachment(s), CDs, or 3 ½ floppy disks. The agency's text editing software is WordPerfect 8; however, we have document viewing capability for MS Word and Adobe Acrobat (.pdf) text files.

Please provide the following information to S. McCrory in the Region IV Arlington office by 2/12/01:

1. Summary list of all currently open/active items for:

condition reports of significant conditions adverse to quality
operator work-arounds

engineering review requests
maintenance requests
temporary modifications
procedure change requests
training needs request/evaluation
control room and safety system deficiencies

2. Summary list of all items completed/resolved/closed since 3/1/00 for:

condition reports of significant conditions adverse to quality
operator work-arounds
engineering review requests
maintenance requests
temporary modifications
procedure change requests
training needs request/evaluation
control room and safety system deficiencies

3. Summary list of all condition reports generated during the specified period and sorted by:

chronology
initiating organization
responsible organization

4. All quality assurance audits and surveillances of corrective action activities since 3/1/00.

5. All corrective action activity and functional area self-assessments and Non-NRC third party assessments since 3/1/00.

6. Corrective action performance trending/tracking information generated since 3/1/00 and broken down by functional organization.

7. Current revision of the following procedures:

1000.104, "Condition Reporting and Corrective Action"
1000.162, "Control of Work"
1000.153, "Engineering Request Process"
1010.008, "Industry Events Analysis Program"

8. Any additional governing procedures/policies/guidelines for:

Condition Reporting
Corrective Action Program
Root Cause Evaluation/Determination
Operator Work-Arounds
Work Requests
Engineering Requests

Temporary Modifications
Procedure Change Requests
Deficiency Reporting and Resolution
Training Needs Request/Evaluation

9. For each of the Generic Communications (applicable to Arkansas Nuclear One) listed below please provide the following:
- j. Full text of the condition report (please indicate any findings that did not result in a condition report or corrective actions)
 - k. Any "Roll-up" or "Aggregating" Conditions Reports related to the generic communication or condition report.
 - l. Root Cause analysis report (if applicable)
 - m. Risk significance assessments
 - n. Probable Cause evaluation (if applicable)
 - o. Approved corrective actions
 - p. Basis for extending originally approved due dates
 - q. Evidence of corrective action completion (work packages, design change documentation, temporary modifications, training lesson plans/material, training attendance records, procedure revisions, etc.)

Part 21 Reports 2000-09-0 through 2000-28-0.

NRC Information Notices 2000-06 through 2000-21

Information Request 2
Arkansas Nuclear One PIR Inspection (IP 71152) 01-05

Please provide the information requested below to S. McCrory in the Region IV Arlington office by 2/26/01. The information may be provided in either electronic or paper media or a combination of these. Information provided in electronic media may be in the form of e-mail attachment(s), CDs, or 3 ½ floppy disks. The agency's text editing software is WordPerfect 8; however, we have document viewing capability for MS Word and Adobe Acrobat (.pdf) text files.

For each of the items listed below please provide the following: *(NOTE - If you believe that the agency has already comprehensively reviewed the problem resolution aspects of any issues related to the requested items, you may bring that to our attention, and we will re-assess the need for further review.)*

- Full text of the condition report, operating experience report, engineering evaluation, etc.
- Any "Roll-up" or "Aggregating" Conditions Reports related to the specific findings or condition report.
- Root Cause analysis report (if applicable)
- Risk significance assessments
- Apparent (Probable) Cause evaluation (if applicable)
- Approved corrective actions

- Basis for extending originally approved due dates
- Evidence of corrective action completion (work packages, design change documentation, temporary modifications, training lesson plans/material, training attendance records, procedure revisions, etc.)

Condition Reports	1-1997-0160*	1-1999-0183*	C-2000-0311
C-1993-0140*	2-1997-0208*	1-1999-0205*	C-2000-0321
C-1994-0001*	2-1997-0229*	1-1999-0209*	C-2000-0374
C-1995-0088*	1-1997-0276*	C-2000-0063	C-2000-0378
1-1995-0236*	2-1997-0304*	1-2000-0068	2-2000-0411
1-1996-0083*	1-1998-0006*	C-2000-0088	2-2000-0712
1-1996-0086*	C-1998-0081*	1-2000-0129	Op Experience
1-1996-0177*	2-1998-0181*	C-2000-0159	OPX-2000-0010
1-1996-0245*	1-1998-0337*	C-2000-0160	OPX-2000-0012
1-1996-0359*	2-1998-0405*	1-2000-0161	OPX-2000-0014
2-1996-0362*	1-1998-0416*	C-2000-0207	OPX-2000-0016
1-1996-0634*	1-1998-0509*	2-2000-0225	OPX-2000-0038
1-1997-0035*	1-1998-0563*	2-2000-0270	Engineering Eval
C-1997-0044*	1-1999-0018*	C-2000-0282	OEE-00-2096
C-1997-0048*	1-1999-0094*	C-2000-0283	OEE-00-2172
1-1997-0098*	1-1999-0176*		

* These older condition reports relate to significant-conditions-adverse-to-quality which were closed after 3/1/00. No additional information is required for those condition reports that required only minor administrative actions to be closed after 3/1/00.

Information Request 3

Arkansas Nuclear One PIR Inspection (IP 71152) 01-05

Please provide the information requested below to S. McCrory in the Region IV Arlington office by 2/27/01. Per the telephone conversation with Mike Cooper of Arkansas Nuclear One, information that cannot be assembled for transmission by this date may be held for the arrival of the team on site. The information may be provided in either electronic or paper media or a combination of these. Information provided in electronic media may be in the form of e-mail attachment(s), CDs, or 3 ½ floppy disks. The agency's text editing software is WordPerfect 8; however, we have document viewing capability for MS Word and Adobe Acrobat (.pdf) text files.

For each of the items listed below please provide the following: *(NOTE - If you believe that the agency has already comprehensively reviewed the problem resolution aspects of any issues related to the requested items, you may bring that to our attention, and we will re-assess the need for further review.)*

- Full text of the condition report, operating experience report, engineering evaluation, etc.
- Any "Roll-up" or "Aggregating" Conditions Reports related to the specific findings or condition report.

- Root Cause analysis report (if applicable)
- Risk significance assessments
- Apparent (Probable) Cause evaluation (if applicable)
- Approved corrective actions
- Basis for extending originally approved due dates
- Evidence of corrective action completion (work packages, design change documentation, temporary modifications, training lesson plans/material, training attendance records, procedure revisions, etc.)

These older condition reports relate to significant-conditions-adverse-to-quality which have been open more than a year. Only a brief statement of the actions required to close the condition report is required for those condition reports that require only minor administrative actions to be closed.

1-1995-0398	1-1999-0243	2-1997-0508	2-1999-0750
1-1995-0615	1-1999-0278	2-1998-0059	2-1999-0769
1-1996-0034	1-1999-0286	2-1998-0133	C-1996-0067
1-1996-0272	1-1999-0288	2-1998-0194	C-1996-0210
1-1996-0346	1-1999-0299	2-1998-0267	C-1996-0245
1-1996-0364	1-1999-0303	2-1998-0395	C-1996-0278
1-1996-0548	1-1999-0341	2-1998-0436	C-1996-0283
1-1996-0567	1-1999-0342	2-1999-0011	C-1997-0043
1-1997-0112	1-1999-0348	2-1999-0070	C-1997-0046
1-1997-0136	1-1999-0354	2-1999-0197	C-1997-0145
1-1997-0295	1-1999-0385	2-1999-0198	C-1997-0218
1-1997-0296	1-1999-0390	2-1999-0213	C-1997-0231
1-1998-0013	1-1999-0422	2-1999-0218	C-1997-0246
1-1998-0068	1-1999-0443	2-1999-0294	C-1997-0338
1-1998-0107	1-1999-0517	2-1999-0303	C-1998-0031
1-1998-0230	1-1999-0548	2-1999-0324	C-1998-0169
1-1998-0251	1-1999-0566	2-1999-0361	C-1998-0198
1-1998-0406	1-1999-0571	2-1999-0380	C-1998-0215
1-1998-0503	1-1999-0577	2-1999-0433	C-1998-0329
1-1998-0505	2-1996-0097	2-1999-0525	C-1999-0043
1-1998-0544	2-1996-0112	2-1999-0539	C-1999-0044
1-1998-0620	2-1996-0293	2-1999-0556	C-1999-0134
1-1998-0695	2-1999-0306	2-1999-0581	C-1999-0238
1-1998-0704	2-1997-0152	2-1999-0662	C-1999-0294
1-1998-0748	2-1997-0168	2-1999-0681	C-1999-0305
1-1999-0016	2-1997-0280	2-1999-0728	C-1999-0308
1-1999-0178	2-1997-0435	2-1999-0744	
1-1999-0186			

Information Request 4
Arkansas Nuclear One PIR Inspection (IP 71152) 01-05

Please provide the information requested below to the PIR inspection team member indicated at the Arkansas Nuclear One facility as soon as possible after the team's arrival on 3/5/01.

Please arrange the requested interviews to begin no earlier than 1 PM on 3/5/01 and to be ended by 10 AM 3/7/01.

Kathy Weaver

Condition Report documentation for each of the following CRs:

2-2000-0587	2-2001-0025	1-2001-0009	1-2000-0161
2-2000-0273	2-2001-0058	1-2000-0165	1-1999-0247
2-2000-0054	2-2001-0043	1-2000-0162	C-2000-0063
2-2000-0260	2-2001-0017	1-2000-0172	

Condition report, and maintenance records (i.e. MAI, Corrective maintenance, PM's) related to instances of loose set screws for EDG air inlet dampers.

Interviews with licensee personnel concerning:

Condition Report 1-95-0398 " Reactor Trip due to degraded Current transformer wiring." The personnel should be knowledgeable on the Preventive maintenance for current and potential transformers, and the corrective actions that have been completed and not completed and if there are similar issues. These discussion will also include preventive maintenance or replacement of electrolytic capacitors.

Condition Report 1-1996-0346 "Main Feedwater Block Valve failed to close during response to Reactor Trip" The personnel should be knowledgeable of the preventive maintenance or replacement of electrolytic capacitors, be able to explain the apparent discrepancy between the denial of Version 2 and approval of Version 3 of the Corrective Action Item CA-018.

Condition Report 1-1996-0364 " Reactor Trip caused by fuse failure" The personnel should be knowledgeable concerning preventive maintenance or replacement of fuses in addition, and the open action to remove and discard the remaining fuses stored in the warehouse" The personnel should be able to address if these fuses were not removed from stores, did any get subsequently used in the plant between 1996 and 2001.

Leonard Willoughby

Interviews with
Manager - Licensed Operator Training
Industry Experience/Events Reviewer/Assessor

Paul Gage

Information request: two T-alts

TAP#	UNIT	Description
00-1-008	1	P-34B DH inboard bearing cooling valve (3/2/00)
00-1-007	1	P-34A DH inboard bearing cooling valve (3/10/00)

Interview requests:

- LPI / DHR system engineer
- Vince Bond (system engineering assessments)
- T. Wilkins (scheduling & work management assessments)
- F. Daubenheyer (maintenance assessment)

Jim Melfi

Requested meetings

Subject	CRs	Questions
Stresses in Unit 1 OTSG tubes. Several Reports refer to higher than anticipated stresses in tubes, changes in the analysis.	1-1999-0016, 1-1998-0230, 1-1998-0337*, 1-1998-0695, 1-1998-0704, 1-1999-0341, 1-1999-0348, 1-1999-0390, 1-1999-0577	What is the overall effects
Followup of actions for old unit 2 steam generators>	2-1997-0280	Some CAs dealt with making sure secondary water chemistry for new S/Gs is OK. What did they do about the Cu & Pb from the pipes? Install new blowdown demineralizer?
Unit 1 fuel grid straps	1-1998-0337*, 1-1999-0390	What are planned corrective action(s)? What is the cause of the grid strap damage? Do other B&W plants with the same fuel have these problems? Use of 'shoe horn' successful? Redesign of fuel successful?
Security Organization		General talk/overview with security. Corrective actions for inadequate bullet shield procured.
U2 tank volumes	2-1997-0304	Why not EDG fuel oil day tanks, volume control tanks, quench tank reviewed for instrument accuracy?