

APPENDIX

U. S. NUCLEAR REGULATORY COMMISSION  
REGION IV

NRC Inspection Report: 50-313/85-14  
50-368/85-14

License: DPR-51  
NPF-6

Dockets: 50-313  
50-368

Licensee: Arkansas Power & Light Company  
P.O. Box 551  
Little Rock, Arkansas 72203

Facility Name: Arkansas Nuclear One (ANO), Units 1 and 2

Inspection At: ANO Site, Russellville, Arkansas

Inspection Conducted: May 13-17, 1985

Inspector: *Dale A. Powers for* 5/31/85  
J. R. Boardman, Reactor Inspector, Date  
Special Projects and Engineering  
Section, Reactor Project Branch 1

Approved: *L. E. Martin* 6/7/85  
L. E. Martin, Chief, Reactor Project Section 2A, Date  
Reactor Project Branch 2

Inspection Summary

Inspection conducted May 13-17, 1985 (Report 50-313/85-14 and 50-368/85-14)

Areas Inspected: Routine, unannounced inspection including the Arkansas Nuclear One maintenance program and followup on previously identified items. The inspection involved 18 inspector-hours onsite by one NRC inspector.

Results: Within the two areas inspected, no violations or deviations were identified.

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DETAILS1. Persons Contacted

- \*T. G. Campbell, Vice President, Nuclear Operations
- \*J. Levine, General Manager, ANO
- \*T. Cogburn, General Manager
- \*B. Baker, Operations Manager
- \*L. Humphrey, Administrative Manager
- \*E. Ewing, Engineering and Tech Support Manager
- \*M. L. Pendergrass, Engineering and Tech Support, Acting Manager
- \*L. Sanders, Maintenance Manager
- R. Wewers, Work Control Center Manager
- \*L. Schempp, Manager of Quality Control
- \*C. Shivley, Plant Engineering Supervisor
- \*D. Lomax, Plant Licensing Supervisor
- \*D. Provencher, QA Engineering Supervisor
- R. Higgins, Special Project Supervisor
- \*J. C. Garrett, Materials Management Supervisor
- \*G. Helmick, Planning and Scheduling Supervisor
- V. Pettus, Mechanical Maintenance Supervisor
- \*P. Cambell, Plant Licensing Engineer
- G. Holt, Electrical Maintenance Coordinator
- M. Bishop, Special Projects Coordinator
- K. Neamitz, Material Control Engineer

\*Denotes those present during the exit interview.

The NRC inspector also contacted other plant personnel, including maintenance, material, and administrative personnel.

2. Followup on Previously Identified Items (Units 1 and 2)

(Closed) Open Item 313/8406-01; 368/8406-01: Incorporation of manufacturers' maintenance data and torque values for ASME line flange joints into the licensee maintenance program. The licensee is reviewing vendor technical data for incorporation into the maintenance program. A consultant was hired to assure correct applications of torque values for safety-related bolted connections. This item is closed based on those actions, licensee maintenance improvements being implemented, and the redundancy of this item to violation 313/8411-02.

(Closed) Open item 313/8406-02; 368/8406-02: Qualification of maintenance coordinators. The licensee has increased the number of maintenance planning and scheduling coordinators from three to 12. Minimum qualifications have been established for four grade levels of coordinators. The licensee's organization has been restructured to include a maintenance Work Control

Center with a manager. These actions with their attendant procedural changes satisfy the NRC inspector's concern in this area.

(Closed) Severity Level IV Violation 313/8411-01: Maintenance of Unit One Main Steam Isolation Valves (MSIVS). Licensee engineering reviewed for acceptability all identified deficiencies, except the lack of documentation of pre-load of bolted joints, including the body-bonnet joint. These joints were detensioned and retorqued. This rework identified that existing site torque wrenches could not have properly and accurately preloaded the initial work performed. Based on the retorquing performed, the engineering analyses done, reinstruction of personnel accomplished, and procedural changes made by the licensee, this violation is closed. The generic aspects are included in unresolved item 313/8411-03; 368/8411-01.

(Closed) Severity Level V Violation 313/8411-02: Overhaul of Unit One 2½" Velan valves in the HPCI system. Licensee corrective action, including engineering evaluation, provided assurance of the acceptability of these valves. The generic aspects are included in unresolved item 313/8411-03; 368/8411-01. Based on specific corrective action accomplished, this item is closed.

(Open) Unresolved item 313/8411-03; 368/8411-01: Problems in content and implementation of the ANO maintenance program. As discussed in paragraph 3, AP&L has implemented significant positive changes in its maintenance program in the past year. Certain improvements have not been finalized, however, such as:

- a. Long-term administration and identification of torque values. (This is complicated by AP&L prohibitions on lubricants that are specified by manufacturers. Use of AP&L approved lubricants can result in torque reduction as great as 0.18 of original torque values.)
- b. Implementation of applicable vendor technical information for maintenance of all safety-related systems, structures, and components. This item will remain open until proposed changes to the ANO maintenance program, discussed in AP&L responses to inspection report 50-313/84-11 and 50-368/84-11, are approved.

### 3. Arkansas Nuclear One (ANO) Maintenance Program

The NRC inspector reviewed the licensee's maintenance program for ANO. A number of changes have been made in the last year to strengthen the program. Documented qualifications for planning and scheduling coordinators have been prepared. Maintenance planning has been established as a separate organization from maintenance, and a work control center has been established for planning and scheduling maintenance.

As an interim measure, for identification of required torque values during Unit 2 outage pending procedure issuance of internal controls, the licensee engaged Westinghouse as a consultant to review job orders for torque requirements and to assure proper utilization of required torque values. Final licensee procedures are being prepared.

In the process of evaluating the licensee's maintenance program, the NRC inspector reviewed licensee procedures relating to the program. The following procedures were reviewed in depth:

<u>Procedure Number</u>	<u>Revision</u>	<u>Title</u>
1000.24	13	Control of Maintenance
1001.24	5	Preventive Maintenance Program
1025.03	9	Conduct of Maintenance
1032.06	4	Procurement Technical Assistance
1000.13	8	Control of Station Modifications
1022.22	6	Transient and Failure Evaluation
1025.06	4	Equipment Environmental Qualification Maintenance Program
1025.007	1	EQ Listed Equipment Approved Lubricants
1032.02	5	Installation Technical Support
1032.01	6	Design Control
1000.11	12	Purchase Requisition Preparation & Control
1015.01	16	Conduct of Operations
1000.18	7	Housekeeping
1063.11	1	Electrical Maintenance Training
1063.09	1	Instrumentation & Controls Training
1063.10	2	Mechanical Maintenance Training
1015.05	3	Shift Supervisor Key Control
1000.27	3	Hold and Caution Card Control
1000.08	20	NRC Reporting and Communications
1032.10	0	Vendor Drawing Receipt, Review and Revision
1403.03	3	Limiter Motor-Operated Valve Inspection & Set up
1403.70	2	Electrodyne Motor-Operated Valve Inspection and Setup
1000.09	13	Surveillance Test Program Control

Licensee procedures appeared adequate with the exception of replacement parts for existing safety-related equipment which was environmentally qualified for harsh environment without being replaced. In those cases, for stocks of parts that required qualification, no procedure existed requiring purging of previously purchased, unqualified parts. The licensee had identified a program to review and purge any such parts. Additionally, all data relating to qualified replacement parts for equipment qualified for harsh environment has not been transmitted to ANO. The licensee was aware of this situation, and was considering required action to assure the availability of necessary data on site.

The NRC inspector found no violations or deviations in the ANO maintenance program.

4. Exit Interview

The NRC inspector met with Mr. T. G. Campbell (Vice President, Nuclear Operations) and other members of the AP&L staff at the end of this inspection. The NRC senior resident inspector was at the exit interview. At this meeting, the NRC inspector summarized the scope of the investigation and the findings.