



April 22, 1992

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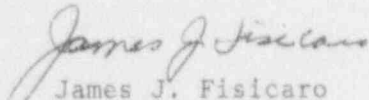
U. S. Nuclear Regulatory Commission  
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SUBJECT: Arkansas Nuclear One - Unit 2  
Docket No. 50-368  
License No. NPF-6  
Licensee Event Report 50-368/90-018-01

Gentlemen:

In accordance with 10CFR50.73(a)(2)(i)(B), enclosed is the subject supplemental report concerning an inadequate Inservice Inspection (ISI) Program. This supplement is being submitted to revise a commitment completion date for comparing Arkansas Nuclear One, Unit 1 (ANO-1) ISI Program contents with ANO-1 isometric drawings and making appropriate revisions to the program contents.

Very truly yours,

  
James J. Fisicaro  
Director, Licensing

JJF/EKH/mmg  
Enclosure

cc: Regional Administrator  
Region IV  
U. S. Nuclear Regulatory Commission  
611 Ryan Plaza Drive, Suite 400  
Arlington, TX 76011-8064

INPO Records Center  
Suite 1500  
1100 Circle, 75 Parkway  
Atlanta, GA 30339-3064

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PDR ADOCK 05003368  
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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Arkansas Nuclear One, Unit Two

DOCKET NUMBER (2)	PAGE (3)
050003681	OF05

TITLE (4) Inadequate Inservice Inspection Program Resulted in the Failure to Perform the Required ASME Code Section XI Inspections for Several Class 3 Component Supports

EVENT DATE (5)			LER NUMBER (6)		REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
Month	Day	Year	Sequential Number	Revision Number	Month	Day	Year	Facility Names	Docket Number(s)
07	31	90	018	01	04	22	92		050003681

OPERATING MODE (9) 1 THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

POWER LEVEL (10)	20.402(b)	20.405(a)(1)(i)	20.405(a)(1)(ii)	20.405(a)(1)(iii)	20.405(a)(1)(iv)	20.405(a)(1)(v)	50.73(a)(2)(iv)	50.73(a)(2)(v)	50.73(a)(2)(vii)	50.73(a)(2)(viii)(A)	50.73(a)(2)(viii)(B)	50.73(a)(2)(x)	73.71(b)	73.71(c)	Other (Specify in Abstract below and in Text, NRC Form 366A)
10															

LICENSEE CONTACT FOR THIS LER (12)

Name: Elizabeth K. Holbert, Nuclear Safety and Licensing Specialist

Telephone Number: 501964-5000

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

Cause	System	Component	Manufacturer	Reportable to NRC	Cause	System	Component	Manufacturer	Reportable to NRC

SUPPLEMENT REPORT EXPECTED (14)

Yes (If yes, complete Expected Submission Date)  No

EXPECTED SUBMISSION DATE (15)

Month	Day	Year

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On July 31, 1990, as part of the Arkansas Nuclear One (ANO) Business Plan (Item D.5.n), a review of the first 10-year interval for Inservice Inspection (ISI) was performed. As a result of the review approximately ninety Class 3 component supports were identified to not have been examined as required by ASME Code, Section XI during the first inspection period and about seven were not inspected in the second period. During the third period one hundred percent of the components were inspected. The root cause of the failure to examine the Class 3 supports was an inadequate maintenance of the ISI program and lack of ISI program involvement by ANO personnel. The first period inspections were performed by contract personnel without appropriate involvement by ANO personnel. The missed examinations in the second period were not properly scheduled due to the ISI program not being adequately maintained. A computer data base of the ISI programs and examinations has been established to provide a more efficient means of tracking and scheduling inspections. Each support has been inspected with no significant safety concerns identified. This event is reportable pursuant to 10CFR50.73(a)(2)(i)(B).

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

A. Plant Status

At the time of discovery of this condition Arkansas Nuclear One, Unit Two (ANO-2) was operating at approximately 100 percent of rated thermal power in Mode 1 (Power Operation). Reactor Coolant System (RCS) [AB] temperature was about 580 degrees Fahrenheit and RCS pressure about 2250 psia.

B. Event Description

Technical Specification 4.0.5 states in part that surveillance requirements for Inservice Inspection (ISI) and Testing (IST) of ASME Code Class 1, 2, and 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code, except where specific written relief has been granted by the Commission. In accordance with ASME Code, applicable to ANO-2 (1974 Edition, Summer 75 addenda), Class 3 component supports on piping systems greater than four inches in nominal size are required to be inspected three times during each 10-year interval at approximately 40 month periods.

It was identified by ANO's Nuclear Quality Group and the ISI group that the ISI program needed improvement. An action plan has been included in the ANO Business Plan (Item D.5.n) to ensure the improvements are made. As part of the action plan for the ANO Business Plan, a review of the ANO ISI program for the first ten year interval was performed and a computer data base established of the components. On July 31, 1990, while performing the review, several (approximately 90 in the first period and about 7 in the second inspection period) Class 3 component supports (i.e., guide hangers, spring hangers, rigid hangers, and mechanical snubbers) on the Service Water (SW) [BI] system were identified not to have been examined. A further review of the identified supports indicated that the supports had been installed prior to the beginning of the 10-year interval and therefore, were required to have been inspected in accordance with ASME Section XI Code requirements.

During the first inspection period approximately 90 component supports were not inspected. Each of these, with the exception of one component, were inspected during the second period; however, seven other supports were not inspected during the second period. The seven which were missed in the second period and the remaining component from the first period were inspected in the third period. Also, in the third period, 100 percent of the Class 3 supports have been inspected.

C. Root Cause

The root cause of the failure to examine each Class 3 support as required by Section XI of the ASME Code can be attributed to an inadequate maintenance of the ISI program and lack of involvement by ANO personnel with the program. In the first period, ANO relied upon contract personnel to perform the Class 3 examinations.

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To identify the location of the supports, the contract personnel used isometric drawings which showed the pipe support locations for the ASME Class 3 piping systems in excess of four inches nominal pipe size. The isometric drawings were supplied to the contract personnel by the architectural engineering company for ANO-2 and did not include all the applicable isometric drawings. Additionally, the contract personnel did not have adequate oversight from ANO personnel during the first inspection period. Only one ANO individual was dedicated for the performance and oversight of the ISI program. This contributed to the missed examinations.

During the second period, the program had been revised to include supports by item number, however, it was still not adequate to ensure that each support was examined. The missed examinations were not properly scheduled to be examined in the second period. Additionally, there was no comparison of the supports that were examined with the supports which were identified in the program as Class 3 component supports to verify that the required examinations were completed.

D. Corrective Actions

The ISI group has been improved by the addition of engineering personnel to ensure that the ISI program is adequately supported and that adequate supervision exists. This will ensure that those performing the inspections have the appropriate level of oversight in the future. Additionally, a computer data base of the ISI Programs (i.e., supports which are required to be examined, locations, examination dates) and examinations has been established. This will provide a means of tracking the inspections as they are performed and of more easily identifying if components have not been inspected, and of ensuring they are appropriately scheduled to be examined and the examinations completed.

In June 1990 a process was established between Plant Modifications and the ISI group to ensure component modifications are identified to the ISI group for resolution. A review of the activity interfaces between the Isometric Update Project and previous Plant Modifications with the ISI program group was performed to ensure each Class 3 component is included in the ISI program contents. As a result of this review, administrative procedures were upgraded to improve the communications between groups.

Additionally, the ANO-2 ISI Program, as it existed prior to October 31, 1990, was compared to the isometric drawings available. The comparison and any necessary program revisions have been completed.

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The ANO-1 ISI Program will also be compared to the ANO-1 isometric drawings and appropriate revisions will be made to the program contents by October 1, 1993. This project, which was originally scheduled to be completed by March 31, 1992, was delayed due to preparations for refueling outage 1R10, which began on February 29, 1992. Delay of this project will not impact the adequacy of the 1R10 inspections or the safety of the plant based on the following:

- The current Interval Program for Unit 1 is governed by the 1980 Edition of the ASME Code through Winter 1981 Addenda. This Edition has significantly reduced the number of examinations required on hangers and piping welds as compared to the 1st Interval Program (1974 Edition). For example, the 1974 Edition required examination of 100 percent of the Class 3 component supports (hangers) each period (approximately one-third of the interval). The 1980 Edition only requires examination of hangers on piping that also requires weld examinations. This limits the hanger examinations to less than 100 percent over the entire interval. Nevertheless, Design Engineering has continued to require examination of 100 percent of the hangers each period. This far exceeds the requirements of the governing Code, and thus demonstrates the integrity of our program.
- The number of welds added and removed from Code Class systems since plant construction is small relative to the Code-induced changes in the required inspection scope. ANO is confident that a large fraction of the added components have been reflected in revisions to the current ISI Program because of the close tie between ISI and Welding in the past.

As part of the ANO Business Plan (Item D.5.n) an improvement program for Inservice Inspection has been established. The objectives of the program include establishing a computer data base of the ISI programs and examinations; performing a review of the first ten-year inspection interval for both units; upgrading both ANO-1 and ANO-2 ISI programs to the 1986 Edition of the ASME Code; and developing procedures, standards, and guidelines for hydrostatic and pressure tests. The program improvements will be completed by December 31, 1994.

E. Safety Significance

There are no safety concerns related to this condition. Each of the components was inspected at least one time and most were inspected twice during the first two periods. In the third inspection period one hundred percent of the components were inspected. Later editions of the ASME Code, Section XI reduce the number of Class 3 component supports which are required to be examined to less than one hundred percent. The ASME Code Committee has recently approved a Code Case which allows for a sampling inspection, further reducing the number of inspections required. Therefore, the inspections required by the 1974 Edition, Summer 1975 Addenda were conservative.

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F. Basis for Reportability

Technical Specification 4.0.5 requires that Inservice Inspections of ASME Code Class 1, 2, and 3 components shall be performed as directed by the applicable ASME Code. Since the inspections of various hangers on the SW system were not performed at the specified intervals, compliance with the requirements of Technical Specification 4.0.5 was not maintained. This condition, therefore, is reportable pursuant to 10CFR50.73(a)(2)(i)(B), as a condition prohibited by Technical Specifications.

G. Additional Information

No similar conditions have been reported.

Energy Industry Identification System (EIIS) codes are identified in the text as [XX].