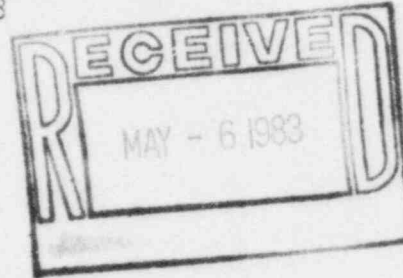




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May 2, 1983



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Mr. W. C. Seidle, Chief
Reactor Project Branch #2
U. S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, TX 76011

SUBJECT: Arkansas Nuclear One - Units 1 & 2
Docket Nos. 50-313 and 50-368
License Nos. DPR-51 and NPF-6
Response to Inspection Reports
50-313/83-03 and 50-368/83-03

Gentlemen:

We have reviewed the subject inspection reports. Please find attached our response to the "Notice of Violation" included in the reports.

Very truly yours,

John R. Marshall
Manager, Licensing

JRM:RJS:s1

Attachment

cc: Mr. Richard C. DeYoung
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Mr. Norman M. Haller, Director
Office of Management & Program Analysis
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

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NOTICE OF VIOLATION

Based on the results of an NRC inspection conducted during the period of February 1-28, 1983, and in accordance with the NRC Enforcement Policy (10 CFR Part 2, Appendix C), 47 FR 9987, dated March 9, 1983, the following violations were identified:

1. Failure to Adhere to Requirements of Refueling Shuffle Procedure - Unit 1

Unit 1 Technical Specification 6.8.1 requires that, "Written procedures shall be established, implemented and maintained covering... b. Refueling operations."

Refueling and Pre-op Sequence of Events Procedure 1502.04, Revision 7, "Refueling Shuffle," has been established in accordance with this Technical Specification.

Unit 1 Technical Specification 6.8.3 states, in part: "Temporary changes to procedures of 6.8.1 above may be made provided: ...b. The change is approved by two members of the plant staff, at least one of whom holds a Senior Reactor Operator's license on the unit affected." The intent of this Technical Specification is to assure that temporary changes to written procedures prescribing activities affecting quality are documented and approved prior to performance.

Contrary to the above, the licensee made temporary changes to Procedure 1502.04 on February 15 and 16, 1983, without the documented approval of a Senior Reactor Operator and one other member of the plant staff. Specifically, during approximately a 12-hour period, from 2030 hours on February 15 to 0830 hours on February 16, 1983, approximately 20 fuel assemblies were located into the core in a different sequence or to a different location than that specified in Attachment D to Procedure 1502.04, without any documentation indicating prior approval for the changes.

This is a Severity Level V Violation (Supplement I) (313/8303-01)

RESPONSE:

Fuel handling operations are governed by Procedure 1502.04, Refueling Shuffle. Incorporated into this procedure are a Chronological Log of Events and a Fuel Shuffle Sequence Legend. The fuel shuffle sequence for the cycle 6 core loading was arranged to provide a "slab" loading pattern. In other words, to complete one row of fuel assembly loading then move to the next row. Difficulties were encountered using this technique and the reload pattern was changed to that of a "checkerboard" pattern. The checkerboard pattern loaded the new bundles of at least two rows to provide a "boxed" location for irradiated bundles. The pattern then proceeded by loading the third row with new bundles and then filling in the boxed locations in the first checkerboarded row

with irradiated fuel. This method/pattern for core loading allowed for increased speed and a significant reduction in handling difficulties.

Changes made in the 1R5 loading pattern/method in no way changed the final core configuration specified for the cycle 6 design. Altering from a slab to a checkerboard loading pattern changed only the order in which sequence moves were made. Core loading in the center region did require temporary placement of fuel assemblies within the region to establish the checkerboard geometry. However, changes in the order of placement and changes made in temporary placement of fuel assemblies during the 1R5 fuel reloading were not made without the knowledge and approval of both the Senior Reactor Operator (SRO) in charge of fuel handling and the Nuclear Engineer on shift. Both of these individuals were documenting their approval of such changes at the end of their respective shifts by initialing the appropriate pages of the chronological log. At no time did work proceed without approved procedures and all work was performed per the guidelines of those procedures and documented as such.

Technical Specification 6.8 states that, "Written procedures shall be established, implemented and maintained covering... refueling operations" and that "temporary changes to procedures... may be made provided:

- a. The intent of the original procedure is not altered.
- b. The change is approved by two members of the plant management staff, at least one of whom holds a Senior Reactor Operator's License on the unit affected.
- c. The change is documented, reviewed by the PSC and approved by the General Manager within 14 days of implementation."

Alterations of order/sequence and temporary placement of fuel assemblies have always been and will always be necessary to maintain the needed flexibility to perform the tasks described and do not constitute temporary changes. This needed flexibility has been identified in 1022.12 by requiring only an Operations Designee and Nuclear Material Custodian to approve fuel assembly transfers. These positions are further defined per 1502.04 to be the SRO in charge of fuel handling and the Nuclear Engineer. At the time changes were made during the 1R5 core reloading, verbal instructions were issued and signatures of approval obtained at the end of shift (as described earlier). The refueling shuffle procedure has since been modified to include an attachment to detail needed sequence changes, i.e., temporary placement of fuel assemblies, and to document prior approval via signatures.

Based on the information presented, in our opinion a technical specification violation did not occur. The procedures in question have been updated to incorporate prior documentation of additional sequence/transfer steps needed during fuel shuffling and any confusion

concerning this matter should now be clarified. At the present time, no changes as to the authority or approval process for order changes of fuel movements are warranted.

2. Use of Unapproved Information Sources During Operation of Unit 2

Unit 2 Technical Specification 6.8.1 requires that, "Written procedures shall be established, implemented, and maintained covering... a. The applicable procedures recommended in Appendix 'A' Regulatory Guide 1.33, Revision 2, February 1978."

Overall Plant Administrative Procedure 1000.36, Rev. 0, "Control of Miscellaneous Information Sources," has been established in accordance with this Technical Specification.

Section 6.1 of Procedure 1000.36 requires that information sources such as curves, drawings, notes, portions of procedures, schematics, etc., that are used for direct plant operation, maintenance, or evaluation be either properly approved by appropriate supervisory personnel or be administratively controlled as specified in Procedure 1013.02, "Control of Procedures." To be properly approved, the information sources must be authorized, dated, and signed by the supervisor having responsibility for the function aided by the information, and an expiration date, not to exceed 12 months from the date of the signature, must be assigned.

Contrary to the above, on February 10, 1983, the following examples of the licensee's failure to comply with the requirements of Procedure 1000.36 were observed:

- a. Graphs used for calculating the estimated critical position (ECP) for the February 10, 1983, Unit 2 reactor startup were neither administratively controlled nor properly approved.
- b. An uncontrolled and unapproved version of Operating Procedure 2105.01, "CPC-CEAC Operations," was used by control room operators during operation of the core protection calculators (CPC's) and control element assembly calculators (CEAC's). This version of Procedure 2105.01 was noted to be three revisions out of date.
- c. Various graphs relating to pressurizer and steam generator level corrections vs. temperature, containment pressure vs. temperature, and boric acid control were attached to control room panels. These graphs were neither administratively controlled nor properly approved.
- d. A drawing of the pressurizer low temperature overpressure relief system and the associated ECCS and high point vent systems was attached to the control room console adjacent to the systems' control handswitches as an aid to operation, but the drawing was neither administratively controlled nor properly approved.

- e. An integrated Unit 2 electrical schematic, showing the entire AC power distribution system, was attached to the control room wall and routinely used by operations personnel for plant evaluation. This schematic was neither administratively controlled nor properly approved.
- f. An administratively uncontrolled and unapproved version of the Unit 2 mechanical and electrical equipment index was routinely used by plant operations personnel for the evaluation of plant operations and for the preparation of system tagouts.

This is a Severity Level V Violation. (Supplement I) (368/8303-01)

RESPONSE:

With respect to specific items cited in 368/8303-01, the status is as follows:

- a. These graphs have been approved in accordance with Procedure 1000.36.
- b. The PID Index portion of Procedure 2105.01 was kept in a separate binder for quick reference. This book has been removed and destroyed by the Control Room Operators.
- c. These graphs have been removed from the control panels.
- d. This drawing has been removed from the control panel.
- e. The present schematic has been approved and will be replaced when the revised schematic is issued.
- f. This index is used for cross-referencing from equipment number to associated controlled drawing number in the preparation of system tagouts. This index was developed to reduce time required for document research and was never designed as a controlled document. The materials used for actual tagout preparation are the controlled drawings.

Assignments were made to each ANO Department Head to review the requirements of Procedure 1000.36 with personnel in their departments and to survey their respective areas to establish compliance with the procedures. The reviews are scheduled to complete by June 15, 1983. It should be noted that Procedure 1000.36, Rev. 0, was approved by the ANO General Manager on February 2, 1983, in order to better control use of miscellaneous materials. The procedure had actually been issued to the field for only a few days prior to the February 10, 1983 citations.

Compliance has been achieved relative to the specific items cited above. Overall compliance in the future will be facilitated by the procedure review and surveys described above.

3. Completion of Procedural Steps Not Verified as Required - Unit 2

Unit 2 Technical Specification 6.8.1 requires that, "Written procedures shall be established, implemented, and maintained covering... a. The applicable procedures recommended in Appendix 'A' of Regulatory Guide 1.33, Revision 2, February 1978."

Design Change Package (DCP) 81-2066, "Interchange Penetration Modules," was established in accordance with this Technical Specification.

Step 5 of the Design Change Summary (Form 1032.01A) for DCP 81-2066 requires two verification signatures to ensure that post-modification testing was completed on two containment electrical penetrations. Step 6 of the same Design Change Summary requires one verification signature to ensure that a procedural prerequisite was accomplished.

Contrary to the above, none of the verification signature blocks were signed for steps 5 and 6 of the Design Change Summary for DCP 81-2066, although DCP 81-2066 was closed out in December 1981 as having been satisfactorily completed.

This is a Severity Level V Violation. (Supplement I) (368/8303-02)

RESPONSE:

Review of Item 50-368/8303-02 reveals this is the same type of violation as that against Unit 1 in Inspection Reports 50-313/83-02 and 50-368/83-02. Specific actions relative to a better review of job orders and related documents were contained in our response to violation 50-313/8302-02 dated April 27, 1983 (OCAN048319). As noted in our previous response, during the time this DCP was originally processed, only one Quality Control (QC) engineer was performing all job order and DCP reviews. Since the addition of two engineers to the QC staff, more thorough reviews are being conducted, and documentation which is incomplete is being returned to the responsible groups or individuals for resolution and completion prior to final review and closeout.