



November 4, 1994

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U. S. Nuclear Regulatory Commission  
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Subject: Arkansas Nuclear One - Units 1 and 2  
Docket Nos. 50-313 and 50-368  
License Nos. DPR-51 and NPF-6  
Response to Inspection Report  
50-313/94-20; 50-368/94-20

Gentlemen:

Pursuant to the provisions of 10CFR2.201, attached is the response to the violation identified during the inspection of activities associated with failure to perform required safety reviews for a calculation which involved a change to ANO's licensing basis.

Should you have questions or comments, please call me at 501-858-4601.

Very truly yours,

Dwight C. Mims,  
Director, Licensing

DCM/slp

Attachments

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## NOTICE OF VIOLATION

During an NRC inspection conducted July 25-29 and August 8-12, 1994, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10CFR Part 2, Appendix C, the violation is listed below:

Section 10 CFR 50.59, *Changes, Tests and Experiments*, of the NRC Regulations states that the holder of a license authorizing operation of a utilization facility may make changes in the facility as described in the safety analysis report without prior Commission approval, unless the proposed change involves a change in the Technical Specifications incorporated in the facility license or an unreviewed safety question.

Criterion III, *Design Control*, of 10 CFR Part 50, Appendix B, states that measures shall be established to assure that the design basis, as defined in 10 CFR 50.2 and as specified in the license application, for structures, systems, and components to which this appendix applies is correctly translated into specifications, drawings, procedures, and instructions.

Criterion V, *Instructions, Procedures, and Drawings*, of 10 CFR Part 50, Appendix B, states that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances, and shall be accomplished in accordance with these instruction, procedures, or drawings.

Arkansas Nuclear One Procedure DEAP 5010.015, *Control of Calculations*, Revision 0, states in Step 6.1.5.A that if potential changes to licensing basis documents result from the issuance or revision of a calculation, the discipline engineer shall secure a 10 CFR 50.59 review by a certified reviewer.

Contrary to the above, Calculation 91-E-0099-10, *Emergency Cooling Pond Peak Temperature and Inventory Loss Analysis Summary*, Revision 0, issued on November 11, 1992, involved an apparent increase in required emergency cooling pond level from that specified in the facility's licensing basis documents, and a 10 CFR 50.59 review was not performed. In addition, the licensee did not initiate action to reflect the required pond level in the Technical Specification, or seek NRC review of alternative compensatory actions which had not been previously reviewed by the Commission.

This is a Severity Level IV violation (Supplement I) (313/9420-02; 368/9420-02).

Response to violation 313/9420-02; 368/9420-02

(1) Reason for the violation:

During the Arkansas Nuclear One (ANO) Service Water System Operational Performance Inspection (SWSOPI), a condition was identified concerning the engineering calculation for the emergency cooling pond (ECP) inventory requirements and Technical Specification requirements. The calculation credits operator actions, via Natural Emergency Abnormal Operating Procedures (AOPs), to provide additional ECP inventory above the minimum five feet required by Technical Specifications. Given the assumptions in the analysis, a five foot level in the ECP without further operator action will provide 26.6 days of ultimate heat sink cooling. This reflects a revision in the 30 day design and licensing basis requirement.

In calculation 91-E-0099-10, *ECP Peak Temperature and Inventory Loss Analysis Summary*, issued in November 1992, credit was taken for AOPs that were in place at the time. The credited actions in the AOPs require that service water (SW) discharge be aligned to the ECP immediately upon lake level falling below 335' for Unit 1 and Unit 2. These AOPs further require that suction not be aligned to the ECP until bay level reaches a predetermined lower setpoint. The analysis concluded even under worst case accident conditions that adequate time existed to assure the availability of a 30 day inventory. The inventory addition to the ECP credited in the analysis is allowed by Regulatory Guide 1.27, Revision 1, *Ultimate Heat Sink for Nuclear Power Plants*, as an alternate means of meeting the required 30 day inventory.

The minimum ECP levels at the time the calculation was performed and approved, were 36 inches in Unit 1 Technical Specifications and 70 acre-feet (60 inches) in Unit 2 Technical Specifications. Although the Unit 1 and Unit 2 Safety Analysis Reports (SARs) did specify a minimum ECP level needed to permit operation of the ECP for 30 days without replenishment, they describe the associated analysis only in a limited summary fashion.

Based upon the changes in our approach to assure a 30 day inventory, additional clarifying information should have been added to the Unit 1 and Unit 2 SARs to reflect the additional assumptions in the analysis. A 10CFR50.59 review should have been performed upon completion of the calculation, which resulted in the need to update the licensing basis document, as required by procedure 5010.015, *Control of Calculations*. However, the 10CFR50.59 review for changes to the Unit 1 and Unit 2 SARs was not completed until July 19, 1994. It was determined that no unreviewed safety question existed nor were any revisions required in the Unit 1 or Unit 2 Technical Specifications or bases of the Technical Specifications. The root cause for the failure to perform the 10CFR50.59 review in a timely manner was determined to be procedure error due to a lack of clarity regarding the timing requirement for licensing basis document changes resulting from revisions

to calculations that introduce an element of incompleteness that is inconsistent with the existing SAR texts.

Additionally, prior to the issuance of the ECP inventory analysis calculation, a condition report (CR) had been written on August 25, 1989, highlighting the differences in the Technical Specifications for the two units. One of the actions from this CR was to revise the Technical Specifications for the units to provide consistency in the requirements and bases. These Technical Specification changes were submitted to the NRC on July 28, 1993, and approved in Unit 1 amendment 170 and Unit 2 amendment 153 issued on November 24, 1993. It was not considered necessary by ANO at that time to provide additional detail for the inventory analysis beyond the level of detail that previously existed. Therefore, this Technical Specification change for Unit 1 was considered to be administrative in nature and did not require detailed descriptions of the ECP analysis. In retrospect, this resulted in inadequate communication of the inventory analysis requirements to the operating staff and consequently has made evident the need for clarifying detail in the licensing basis documentation and operator training. Therefore, a contributing cause to the condition was a failure by ANO to recognize the need to clearly reflect in the Technical Specification bases the need for operator action to ensure the necessary ECP inventory.

(2) Corrective steps taken and results achieved:

Unit 1 AOP 1203.025, *Natural Emergencies*, Unit 2 AOP 2203.008, *Natural Emergencies*, and Operations Procedure 1015.003B, *Unit Two Operations Logs*, were revised to administratively control ECP level to greater than 64 inches until the Unit 1 and Unit 2 Technical Specification bases have been modified and SAR changes are reviewed and approved internally to clearly reflect the dependence upon operator action. This will afford adequate margin in the pond inventory to meet the 30 day Licensing and Design requirement without requiring operator action. This dependence on operator action has been communicated to the Unit 1 and Unit 2 operations personnel to ensure awareness of ECP inventory analysis requirements.

(3) Corrective steps that will be taken to prevent further violations:

The Unit 1 and Unit 2 Technical Specification bases and SARs will be updated for both units to clearly reflect the dependence upon operator action. These licensing basis document changes and supporting 10CFR50.59 reviews will be completed by January 30, 1995 and the Technical Specification bases changes modified by March 30, 1995. The SAR changes will be submitted in the next updates currently scheduled for October of 1995 for Unit 1 and June of 1996 for Unit 2.

ANO Procedure 1000.131, *10CFR50.59 Review Program*, will be modified to provide additional guidance on determining the necessity for SAR revisions where operator actions are required to meet the licensing basis and where the intent of

the SAR text is modified. This procedure change will be completed by January 30, 1995.

The calculation cover sheet contained in Engineering Procedure 5010.015, *Control of Calculations*, will be revised to have a clear indication that a Configuration Checklist from engineering procedure 5010.004, *Design Documents Updates*, has been completed. In addition, clear guidance will be given regarding the requirement for timely licensing basis documentation changes for calculations that either render the licensing basis documentation inaccurate or introduce an element of incompleteness that is inconsistent with the existing licensing basis documentation. This will provide a closer tie between the two controlling procedures and their requirements. These actions will be completed by January 30, 1995.

(4) Date when full compliance will be achieved:

Full compliance to correct the overall condition will be accomplished on March 30, 1995, when the Technical Specification bases changes are submitted to the NRC for both units.