



July 16, 1992

1CAN079201

U. S. Nuclear Regulatory Commission
Document Control Desk
Mail Station P1-137
Washington, DC 20555

Subject: Arkansas Nuclear One - Unit 1
Docket No. 50-313
License No. DPR-51
Pressurizer Surge Line Thermal
Stratification, Bulletin 88-11
(TAC No. M72108)

Gentlemen:

By letter dated December 20, 1988 (OCNA128827), the NRC issued Bulletin 88-11, "Pressurizer Surge Line Thermal Stratification". Action 1.d of the Bulletin requested the licensees to update their stress and fatigue analyses to ensure compliance with applicable Code requirements, incorporating any observations from the inspections required by other Bulletin actions. The Bulletin also required the licensees submit a letter 30 days after the completion of the Action 1.d. In letter dated March 28, 1991 (1CAN039101), Entergy Operations notified the NRC that the requested actions had been completed for Arkansas Nuclear One, Unit 1 (ANO-1).

The Babcock & Wilcox Owners Group (BWOG) submitted the "Final Submittal for Nuclear Regulatory Commission Bulletin 88-11 'Pressurizer Surge Line Thermal Stratification'" (BAW-2127) on December 31, 1990. This submittal satisfied the intent of Action 1.d. This report concluded that the lowered loop plant's surge line (which includes ANO-1's surge line) can meet their 40-year design life.

The NRC transmitted the Safety Evaluation of BAW-2127 to ANO-1 in letter dated August 26, 1991 (1CNA089102). Based on their review, the Staff concluded that the methodology used to evaluate and analyze the stress and fatigue effects was generally acceptable, except for one issue. This issue involved the stress index used in calculating thermal expansion stress for surge line elbows. In this letter, the NRC requested, following resolution of the stress index issue, that ANO-1 provide verification of the plant-specific applicability of the BWOG program and results.

920722001B 920716
PDR ADOCK 05000313
G PDR

IE30
1/8

Entergy Operations committed to provide verification of the ANO-1 specific applicability of the BWOG program and results within thirty days after issuance of the BWOG's final report on the resolution of the stress index issue in letter dated December 20, 1991 (1CAN129105).

In letter dated June 11, 1992, the BWOG transmitted Supplement 2 to BAW-2127. This supplement provided the results of the re-evaluation of the pressurizer surge line elbows performed using ASME Code stress indices, including shakedown and strain based fatigue. Since only those program aspects directly contributing to the surge line shakedown and elbow fatigue were considered in this supplement, the other program aspects and general methodologies remain unchanged from the original BAW-2127. This supplement concluded that at all surge line locations, the 40-year cumulative fatigue usage factor remains less than the Code allowable fatigue usage factor. The purpose of this submittal is to provide the requested plant-specific applicability verification.

Section 8, "Bases for the BWOG Analysis - For Plant Specific Application", of BAW-2127 identified several conditions on which the thermal stratification fatigue analysis of the surge line and the generation of the revised Design Basis transients were based. These conditions must be addressed to ensure the applicability of the generic results to each specific plant. In letter dated March 28, 1991 (1CAN039101), ANO-1 addressed each condition.

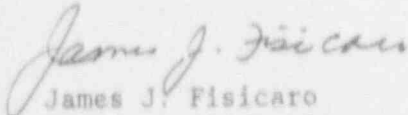
The evaluations for the surge line drain and the two small bore pipe supports that were listed in 1CAN039101 were completed in early 1991. The operational and surveillance guidelines provided in BAW-2127 were incorporated into the appropriate procedures.

Based on the above, Entergy Operations determined that the results of BAW-2127 were applicable to ANO-1. Since Supplement 2 only dealt with those program aspects directly contributing to the surge line shakedown and elbow fatigue, Entergy Operations concludes that the results of BAW-2127 and Supplement 2 to BAW-2127 are applicable to ANO-1.

Therefore, ANO and the BWOG have completed the stress and fatigue analyses that ensure compliance with applicable Code requirements as required by Item 1.d of NRCB 88-11. In Entergy Operations letter dated December 20, 1991 (1CAN129105), Entergy Operations stated that the functional specifications and certified stress reports would be completed within three months of the receipt of a favorable Safety Evaluation on the final report. However, the completion of these items is now being performed as part of a larger BWOG Plant Aging and Life Extension (PALEX) Committee effort. Even though the functional specifications and certified stress reports represent the final ANO documentation for NRCB 88-11, the resolution of the surge line thermal stratification issues is considered complete based on the ANO applicable results of BAW-2127.

In accordance with the requirements of 10CFR50.54(f), this letter is being provided under oath. Should you have any questions regarding our response to this issue, please contact me.

Very truly yours,



James J. Fisicaro
Director, Licensing

JJF/RWC/sjf
Attachments

cc: Mr. James L. Milhoan
U. S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011-8064

NRC Senior Resident Inspector
Arkansas Nuclear One - ANO-1 & 2
Number 1, Nuclear Plant Road
Russellville, AR 72801

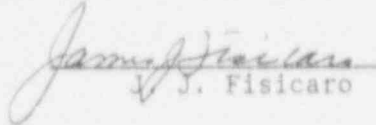
Mr. Thomas W. Alexion
NRR Project Manager, Region IV/ANO-1
U. S. Nuclear Regulatory Commission
NRR Mail Stop 13-H-3
One White Flint North
11555 Rockville Pike
Rockville, Maryland 20852

Ms. Sheri R. Peterson
NRR Project Manager, Region IV/ANO-2
U. S. Nuclear Regulatory Commission
NRR Mail Stop 13-H-3
One White Flint North
11555 Rockville Pike
Rockville, Maryland 20852

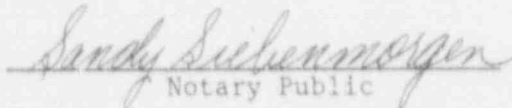
STATE OF ARKANSAS)
) SS
COUNTY OF LOGAN)

Affidavit

I, J. J. Fisicaro, being duly sworn, subscribe to and say that I am Director, Licensing at ANO for Entergy Operations, that I have full authority to execute this affidavit; that I have read the document numbered 1CAN079201 and know the contents thereof; and that to the best of my knowledge, information and belief the statements in it are true.


J. J. Fisicaro

SUBSCRIBED AND SWORN TO before me, a Notary Public in and for the County and State above named, this 16th day of July, 1992.


Notary Public

My Commission Expires:

May 11, 2000