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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

JANUARY 3 1980

Mr. Emil G. Garrett
Post Office Box 91
Stockton Springs, Maine 04981

Dear Mr. Garrett:

The following information is provided in response to your request by letter dated October 29, 1979, for information concerning the progress on the Asymmetric LOCA loads problem.

The NRC informed each PWR licensee by letter dated January 25, 1978, that a reevaluation of their primary system for newly identified LOCA loads would be required. The letter further stated a staff desire to resolve this issue within two years. An inhouse study, Task Action Plan A-2, was initiated to both provide the staff with a better understanding of this postulated event and to develop criteria for the review of each plant evaluation submitted by the licensees. This inhouse study was completed in September 1979 and will be published in a NUREG report, projected for December 1979. Currently, each licensee is either actively pursuing the reevaluation or has completed this effort and has submitted a report for staff review.

Specific response to each of the four questions in your letter are provided below:

1. Your letter of 25 January 1978 requested all licensees of PWR's to submit detailed schedules for evaluation of the problem. How many of the licensees have satisfactorily complied with this request? Has Maine Yankee satisfactorily complied with the request? (I have been unable to find any evidence in Docket No. 50-309 that Maine Yankee has ever provided the detailed schedule requested).

Response

All of the PWR licensees have provided the staff with a plan and schedule for the resolution of this problem. Most of the PWR licensees formed Owners Groups consisting of plants with similar NSSS vendors and submitted a schedule applicable to all plants in the group. A few plants such as Maine Yankee are pursuing an independent evaluation.

The current schedule for Maine Yankee was provided to the staff in a letter dated September 27, 1979. The staff also met with the Maine Yankee staff on October 18, 1979, to review their progress and results. A copy of the meeting summary and the September 27, 1979 letter are attached.

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2. Has the problem been resolved to NRC satisfaction by the licensees of any operating PWR's? If so, which ones and how was the problem resolved?

Response

Currently this issue has not been completely resolved for any operating plants. The required licensee evaluation has been completed for a number of plants, listed below, and reports have been submitted to the staff. The review of these reports against criteria developed by the staff inhouse study, Task Action Plan A-2, is in progress. The proposed solution in these licensee reports range from an analytical assessment demonstrating that existing supports will withstand the loads to the addition of load mitigating devices such as pipe break restraints. The projected completion date for staff review of these plants is January 1980.

North Anna	Indian Point Unit 2
Beaver Valley	Indian Point Unit 3
Farley	Salem Unit 1
Trojan	Salem Unit 2
Arkansas Unit 2	

3. What is the current status of extending consideration of the problem to BWR's?

Response

The staff determined during the early review of this problem that the safety significance with respect to BWRs was much less due to significantly lower primary system pressures. The staff therefore made a decision to investigate this problem on the PWR plants before initiating an effort on BWR plants. The information gained from the PWR evaluation will be used by the staff to determine whether a safety issue exists with respect to the BWR plants. The staff expects to be able to make that determination early in 1980 when the PWR evaluations are completed.

4. In the event that Maine Yankee does not resolve the problem to NRC satisfaction by 25 January 1980 - what spectrum of actions would the NRC consider?

Mr. Emil G. Garrett

- 3 -

JANUARY 3 1980

Response

A spectrum of potential staff actions is not possible to project without reviewing the specific evaluation status and results. The staff will review and evaluate the work completed for the Maine Yankee facility and make a determination if adequate assurance has been provided to justify continued operation of the facility without jeopardizing the health and safety of the public.

Sincerely,

Darrell G. Eisenhut, Acting Director
Division of Operating Reactors

Enclosure:
As stated

DISTRIBUTION

Docket (50-309)
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12/11/79

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typed 12/6	SHosford:1b	LShao	DGEisenhut		
DATE →	12/6/79	12/17/79	12/21/79		



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ENGINEERING OFFICE

TURNPIKE ROAD (RT. 9)
WESTBORO, MASSACHUSETTS 01581
617-366-9011

September 27, 1979

United States Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Office of Nuclear Reactor Regulation

References: (a) License No. DPR-36 (Docket No. 50-309)
(b) USNRC letter to MYAPC dated January 25, 1978
(c) MYAPCo Letter to USNRC dated July 23, 1979

Dear Sir:

Subject: Maine Yankee Asymmetrical LOCA Loads Evaluation

The purpose of this letter is to update our last letter (reference (c)) concerning our evaluation of the asymmetrical LOCA loading issue.

Postulated Breaks Inside the Reactor Vessel Cavity

Maine Yankee has awarded a contract to EDS Nuclear Services to perform a feasibility study of installing cold and hot leg pipe restraints in order to limit the postulated break size hence reducing the consequences of the asymmetric loads. During our recent outage, "as built" dimensions were taken in order to insure proper design data. Maine Yankee will receive a design report by the end of the first week in October. The resulting break open area will be used to generate LOCA loads which will be input for the structural analysis of the vessel structures.

Maine Yankee plans to hold a meeting with the NRC to discuss the results of the EDS design study and additional analyses required for resolution of the asymmetrical loading issue for breaks postulated inside the reactor vessel cavity. If an agreement is reached between the NRC and Maine Yankee as to the extent of additional analyses required, the pipe restraints would be installed as soon as practical. At the present time the target date would be the upcoming refueling outage in early 1980.

Postulated Breaks Outside the Reactor Vessel Cavity

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Maine Yankee's approach from the beginning has been to first assure the adequacy of the vessel support structures since our preliminary scoping studies have indicated this to be the area which is most effected by asymmetrical loading. Both Combustion Engineering and Westinghouse in general, have proven this premise for their respective owner groups. Maine Yankee has begun a study to compare our subcompartment geometry, postulated mass energy release and structural responses to plants which have shown structural adequacy with the additional asymmetrical loads. With this data Maine Yankee will demonstrate through conservative comparisons the structural

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United States Nuclear Regulatory Commission
Attention: Office of Nuclear Reactor Regulation

September 27, 1979
Page Two

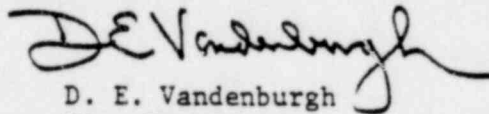
integrity of the supports and structures. This effort should be completed by the beginning of 1980. A report will be submitted to the NRC shortly thereafter.

The NRC notified Maine Yankee in January 1978, Reference (b), that a two year completion date was required to resolve the asymmetric LOCA loads issue. The approach that we have taken will enable us to satisfy that requirement. During a meeting in October we will present our schedule which we believe will resolve the asymmetrical loading problem for Maine Yankee by the end of January 1980.

If any questions arise, please feel free to call us at our office (617) 366-9011.

Very truly yours,

MAINE YANKEE ATOMIC POWER COMPANY



D. E. Vandenberg
Vice President

TMC/smw

1756 046



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

NOVEMBER 2 1979

Docket No. 50-309

MEMORANDUM FOR: Larry C. Shao, Acting Assistant Director for
Engineering Programs

FROM: Steven B. Hosford, Technical Assistant for
Engineering Programs

SUBJECT: SUMMARY OF MEETING WITH MAINE YANKEE ATOMIC POWER COMPANY
ON OCTOBER 18, 1979, TO DISCUSS THEIR ASYMMETRIC LOCA
LOADS EVALUATION, IN BETHESDA, MARYLAND

The NRC staff met with Maine Yankee Atomic Power Company on October 18, 1979, to discuss their schedule and status for the Asymmetric LOCA Loads Evaluation.

The approach chosen by Maine Yankee was to perform an analysis taking credit for break area limiting devices. The analytical work proposed by Maine Yankee will be a simplified analysis taking credit, where applicable, for analysis performed on similar structures.

The proposed modification to limit the break area, of the postulated rupture at the RPV nozzle, has been assessed by M.Y.A.P.C. and can be performed during the planned January 1980 outage. The proposed modification will not interfere with required ISI of the RPV nozzles or impose any additional loadings on the primary system.

The staff agrees with this approach in concept and informed the representatives from Maine Yankee, in the meeting, that details of both the modification and the analysis should be submitted to the staff for review as soon as possible.

A handwritten signature in dark ink, appearing to read "Steven B. Hosford".

Steven B. Hosford, Technical Assistant for
Engineering Programs
Division of Operating Reactors

Attachment:
List of Attendees

cc: See next page

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Meeting Summary

- 2 -

NOVEMBER 2 1979

cc: D. Eisenhut
L. Shao
R. Vollmer
B. Grimes
V. Noonan
D. Crutchfield
R. Reid
K. Wichman
T. H. Liu
M. Fairtile
S. Hosford
J. Hoffman, MY
D. Carleton, MY
R. Fraley, ACRS (16)
OI&E (3)
OELD
S. Showe, I&E
J. R. Buchanan
TERA
H. R. Denton
E. G. Case
NRR Reading
A/D:EP Reading

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MEETING WITH MAINE YANKEE
OCTOBER 18, 1979
ASYMMETRIC LOADS

NRC

S. Hosford
T. H. Liu
M. Fairtile

MAINE YANKEE

J. R. Hoffman
T. M. Cizmuskas
A. V. Rondenko
D. Carleton

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