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LEMPGES,T.E. Niagara Mohawk Power Corp.
RECIP.NAME RECIPIENT AFFILIATION
VASSALLO,D.B. Operating Reactors Branch 2

SUBJECT: Forwards "SN-15 Nozzle Repair Rept," preliminary "Reactor Recirculation Piping Replacement Analysis for Nine Mile Point Unit 1" & addl repair reanalysis info,in response to NRC 830328 request.

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April 22, 1983

Director Nuclear Reactor Regulation
Attention: Mr. Domenic B. Vassallo, Chief
Operating Reactors Branch No. 2
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Nine Mile Point Unit 1
Docket No. 50-220
DPR-63

Gentlemen:

Your letter of March 28, 1983 requested information on our recirculation piping stress reanalysis and repair activities associated with No. 15 nozzle. The attachment to this letter provides the information requested.

In addition, your letter requested the results of evaluations and examinations conducted on the material and components removed from service be provided for long-term staff review. These efforts are still in progress and will be provided when available.

Very truly yours,

T E Lempges

T. E. Lempges
Vice President Nuclear Generation

TEL/RJP:bd

Attachment

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Additional Information

Nine Mile Point Unit 1

Reactor Recirculation System Piping and Safe-End Replacment Program

Requested Information

(1) An audit of your stress reanalysis of the replaced recirculation piping to determine if the design criteria and methodology are at least as conservative as the commitment presented in the FSAR. Your submittal should include a summary of the results of the analyses for the limiting cases for piping and piping supports, the design and acceptance criteria, and the analysis methodology. Also, clarify how the branch connections were evaluated if they were decoupled from the recirculation system piping analyses and how interactions between the branch lines and recirculation piping were treated to obtain the loads.

Response

The attached Teledyne Engineering Services Technical Report TR-5828-1 dated April 22, 1983 summarizes the stress reanalysis of our replaced reactor recirculation piping.

The reanalysis modeled two Reactor Recirculation Loops which bound the conditions of the remaining three loops. Loop 15 was modeled because it has two branch connections including the largest diameter branch piping attached to it. Loop 12 was modeled because it has no significant attached branch piping. The five loops are similar in other respects and, therefore, are bounded by this analysis.

The analysis was performed in accordance with the criteria and methodology of the 1977 ASME Boiler and Pressure Vessel Code, Section III, Subsection NC, including addenda through Winter 1979 as stated in our October 5, 1982 submittal. The acceptance criteria for allowable stresses also used the values associated with the 1977 code with the addenda through Winter 1979. Branch lines were not decoupled and were modeled as part of the recirculation loop and analyzed up to their first respective anchor points. The above analysis is at least as conservative as the commitment presented in the FSAR.

Any pipe support loads that changed significantly from the original analysis were evaluated to verify acceptable load ratings of the component supports and acceptable stress levels in structural members. The results of these evaluations showed new and existing supports to be adequate. In cases where support loads were essentially the same, no additional analysis was performed. Snubber support steel was designed in accordance with the maximum rated snubber load. Since no snubbers were changed and loads were below the manufacturers rated load, the previous analysis for structural members is still valid.

Requested Information

(2) A review of the summary of your repair activities for the repair of the No. 15 nozzle safe end.

Response

The attached Newport News Industrial Corporation - NMPC Nine Mile Point Unit 1, SN-15 Nozzle Repair Report dated April 18, 1983 summarizes the repair of the No. 15 nozzle safe end. In addition, Revision A Supplement No. 3 of the Stress Report is provided for your review.

In summary, these documents conclude that the repair and subsequent post weld heat treatment were satisfactorily completed. The induced stresses remained below the material yield.