Docket 50-57

MAY 7 1976

Docket No.: 50-508, 509
MS No.: 27-112

R. C. DeYoung, Assistant Director
for Light Water Reactors
Division of Project Management

WASHINGTON PUBLIC POWER SUPPLY SYSTEM, DOCKET NOS: 50-508, 50-509

Plant Name: Washington Nuclear Project No. 3 (WNP-3) & No. 5 (WNP-5)
Docket Numbers: 50-508, 509
Licensing Stage: PSAR
Responsible Branch & Project Manager: LWR 3, A. Bournia
Responsible SS Branch & Technical Reviewer: MEB, F. Cherny, P. Chen
Requested Completion Date: 5-7-76
Description of Response: Supplement to Safety Evaluation Report
Review Status: Complete

Attached as the MEB input to this supplement is a response to the question raised in the ACRS letter of 4-16-76 regarding the design of the reactor vessel supports. The question relates to the generic concern which has been raised about theeaffects of the transient asymmetric differential pressure loads that act on the reactor internals and around the exterior of the reactor vessel resulting from a postulated pipe rupture at a reactor vessel nozzle safe end. Assurance must be provided that these loads are adequately accounted for in the design of the vessel supports.

Since the WPPSS 3 & 5 plants are CESSAR reference plants, we have assumed that the applicant will adopt the solution to this generic problem which has been committed to by Combustion Engineering on the CESSAR docket. The CE commitment has been addressed in section 3.9.1.5 of the CESSAR SER, and we noted this in our letter of 8-28-75 which transmitted the MEB input for SER sections 3.6 and 3.9.2.5.

In addition, since that time, the WPPSS 3 & 5 applicant has addressed this subject in a letter to NRC dated 12-31-75. The applicant has provided an acceptable commitment that the WPPSS 3 & 5 vessel supports will be designed with the referenced loads taken into account.

Since the applicant's letter does not refer specifically to CESSAR, we have referred only to the applicant's commitment in our attached input.

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Also, for clarification, we note that the 4-16-76 ACRS letter referenced above was transmitted to MEB by Mr. A. Bournia's letter of 4-19-76 to DSS Branch Chiefs. Mr. Bournia's letter provided recommendations as to which DSS branches might be involed in addressing specific questions raised in the ACRS letter. The Mechanical Engineering Branch was listed for providing responses to paragraphs 2, 6, and 7 of the ACRS letter. We have determined that paragraph 2 should be addressed by MEB. This input is attached. The Structural Engineering Branch will address paragraphs 6 and 7 in separate correspondence.

R. R. Maccary, Assistant Director
for Engineering

Division of Systesm Safety

cc: R. E. Heineman, SS
O. Parr, PM
J. P. Knight, SS
A. Bournia, PM
H. L. Brammer, SS
F. C. Cherny, SS
P. Chen, SS

Docket Files
DSS: Rdg File
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SURNAME ▶	FCCherny:jk	PYChen	HLBrammer	JPKnight v	RRMaccary
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MECHANICAL ENGINEERING BRANCH

DIVISION OF SYSTEMS SAFETY

WASHINGTON NUCLEAR PROJECT NO. 3 and 5

SUPPLEMENT TO SAFETY EVALUATION REPORT

5.2.1 Design of Reactor Coolant Pressure Boundary Components

The ACRS in their letter of April 16, 1976 to NRC Acting Chairman M. A. Rowden stated that a generic question has arisen concerning loads on the reactor vessel support structure for certain postulated loss-of-coolant accidents in pressurized water reactors. The letter further stated that the matter should be resolved for WNP-3 and WNP-5 in a manner satisfactory to the staff.

By letter dated November 26, 1975 from O. D. Parr to J. J. Stein, we requested the applicant to verify that the final design procedures would account for transient asymmetric pressure loads on the reactor vessel supports. In a letter dated December 31, 1975, from M. O. Strand to B. C. Rusche, the applicant stated that it is their intent that the final design of the reactor vessel support system will take into account these asymmetric pressure loads in combination with appropriate LOCA and seismic loads.

The applicant further stated that the results of these analyses and the final design parameters for the supports will be incorporated in the Final Safety Analysis Report.

We consider this to be an acceptable commitment, and, that accordingly, the design of the reactor vessel supports is acceptable for the construction permit stage of review.