

CONTRIBUTION:
Docket File
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APR 13 1973

Docket No. 50-305

R. C. DeYoung, Assistant Director
for Pressurized Water Reactors
Directorate of Licensing

WISCONSIN PUBLIC SERVICE CORPORATION - KEWAUNEE NUCLEAR GENERATING
PLANT - HIGH-ENERGY LINE RUPTURE OUTSIDE CONTAINMENT - ACRS INPUT
FROM FSAR REVIEW AND EVALUATION

Plant Name: Kewaunee
Licensing Stage: FSAR Review
Docket Number: 50-305
Responsible Branch and Project Manager - PWR-2, L. P. Crocker
Requested Completion Date: April 15, 1973
Applicant's Response Date Necessary for Completion of Next Action
Planned on Project: N/A
Description of Response: Report
Review Status: Complete

PKT. 4
50-305
A review of the information furnished by the applicant in Amendment #27 concerning a postulated break of high-energy lines outside of containment, has been completed by the Structural Engineering Branch. Our sections of the safety evaluation are enclosed.

The Structural Engineering Branch found that the information relative to structural criteria is adequate and that Class I structures can withstand the loads resulting from high-energy line rupture outside of containment. We do not expect any unresolved items to arise before the ACRS meeting takes place.

R. R. Maccary, Assistant Director
for Engineering
Directorate of Licensing

Enclosure:
Structural Evaluation

cc w/o encl:
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DATE ▶	4/11/73	4/12/73	4/11/73			

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR GENERATING PLANT

APR 13 1973

Docket No. 50-305

Amendment No. 27

High-Energy Line Rupture Outside of Containment

Structural Evaluation

Structural Design Criteria

The applicant has designed Class I structures, for the load combinations and working stresses as indicated in FSAR Tables B.6-1; B.6-2 and B.6-3. The applicant will check the existing Class I structures and any new structures required for protection against the consequences of the postulated high-energy line rupture for the following combination of loads: dead load, live load, earthquake load, jet or pressure load, equipment and pipe reactions. For these combinations, the limiting design stresses will be $f_c = 0.85 f'_c$ for concrete and $f_s = f_y$ for reinforcing bars and structural steel. The handling of concrete shear stresses will be in accordance with the ACI 318-63 Code. We believe that this design will withstand the pressurization, pipe and jet loadings resulting from a postulated break outside the containment.