

DOCKET FILE

DEC 17 1971

Docket Nos. 50-254
and 50-265

Commonwealth Edison Company
ATTN: Mr. Byron Lee, Jr.
Assistant to the President
P. O. Box 767
Chicago, Illinois 60690

Gentlemen:

In your letter dated October 22, 1971, subject "Request to Install an Energy Absorbing system on Quad-Cities Units 1 and 2", you described specific design features for a system that would serve to mitigate the consequences of an unlikely drop of a fuel shipping cask for the Quad-Cities fuel pools. A review of your proposed preliminary design and analyses, indicate that the following additional supporting information will be needed to complete our evaluation:

1. Provide resistance functions (resistance vs deflection) for the proposed energy absorbing structure and the supporting fuel pool floor along with the technical bases for these functions. The bases for the values used along with a discussion of margins provided for uncertainties should be included in your response.
2. Provide estimates of the fractions of input energy absorbed by the proposed energy absorbing structure and the fuel storage pool floor, and estimates of the size and leak rates of the residual cracks in the pool floor following the assumed cask drop. Include a discussion of water makeup system capabilities to makeup excessive water loss from the pool including the bases for the water leakage estimates along with a discussion of the conservatism used in the calculations.
3. Justify the use of 537 psi for the allowable shear across concrete joints for the fuel pool structure. ACI318-63 does not appear to make allowance for such a high shear stress value. Include with your justification sketches of the joints subjected to these shears.

Sincerely,

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Roger S. Boyd, Assistant Director
for Boiling Water Reactors
Division of Reactor Licensing

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DATE ▶	12/16/71	12/16/71		