

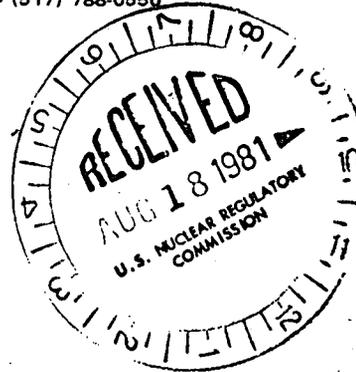


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August 13, 1981

Director, Nuclear Reactor Regulation
Att Mr Dennis M Crutchfield, Chief
Operating Reactors Branch No 5
US Nuclear Regulatory Commission
Washington, DC 20555



DOCKET 50-255 - LICENSE DPR-20 -
PALISADES PLANT - SEP TOPICS II-3.A, II-3.B, II-3.B.1 AND II-3.C

By letters dated March 20, 1981 and March 31, 1981, the NRC transmitted for comment a draft evaluation of SEP Topics II-3.A, II-3.B, II-3.B.1 and II-3.C concerning site hydrology, flooding and ultimate heat sink considerations. The following comments are provided for your consideration:

Topic II-3.A, II-3.B, II-3.B.1

1. Page 5, first paragraph: Although we believe the service building could withstand the predicted water runoff depths, this question is not of concern since the building is not a safety-related structure.
2. Page 5, last paragraph: We do not agree with the NRC consultant's value of 13.6 feet for the maximum probable seiche. The basis for this value relies heavily on an assumed value used for the factor for shoaling. This is a multiplication factor which is applied to the offshore surge as determined by the Platzman approach to account for shoreline effects including curvature and bottom slope. Previous Palisades calculations used a value of 1 where the NRC's consultant has apparently used a value of approximately 3.5. The selection of a value for the shoaling factor, however, appears to be somewhat a matter of judgement. Available information indicates that most surge height measurements have been made in harbors or similar restricted waters where the effect of shoaling can substantially increase the water level rise. The shoreline at Palisades, however, is quite regular for long distances on either side of the plant. This combined with the very regular bottom topography should preclude significant shoaling at the site. Our investigations to date indicate that if any increase in the original shoaling factor is appropriate at all, a value of two should be sufficiently conservative without being excessive.
3. Page 5a: A maximum wave can only occur in a fully developed sea from a wind which has been sustained over a long period of time. A seiche, on the other hand, is developed by the pressure difference across a squall line which moves across the lake at a speed corresponding to the natural

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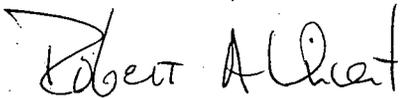
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gravity wave speed for the existing depth of water. A seiche, therefore, is associated with the beginning of a storm while the maximum wave requires those storm conditions to be present for many hours. It is not possible for the maximum wave and the seiche to be present simultaneously.

4. Page 8: Plant off-normal procedure ONP-12 does consider flooding from external sources such as a seiche. This procedure requires, among other things, that a plant shutdown be started as water level approaches el. 590', and that the reactor be tripped if level exceeds el. 590'. Since the water level rise from a seiche is a slow phenomenon, and since the plant would have prior warning through the National Weather Service, ample time would be available for operator action.

Topic II-3.C

1. Page 3: The value of 13.6 feet for maximum setdown is excessive. See previous comments on maximum probable seiche height.



Robert A Vincent
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CC Director, Region III, USNRC
NRC Resident Inspector - Palisades