MAY 17 1979

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T. Abernathy, TIC
ACRS (16)

Docket No.: 50-397

Mr. Neil O. Strand
Washington Public Power Supply System
300 George Washington Way
P. O. Box 968
Richland, Washington 99352

Dear Mr. Strand:

SUBJECT: FIRST ROUND QUESTIONS ON THE WNP-2 OL APPLICATION - AB

In our review of your application for an operating license for the WNP-2 facility, we have identified a need for additional information which we require to complete our review. The specific requests are contained in the enclosure to this letter and are the tenth set of our round one questions; additional requests related to other portions of the WNP-2 facility will be sent during this month. In order to maintain our present schedule, we need a completely adequate response to all questions in the enclosure by July 20, 1979. The attached set of round one questions represent the review effort of the Analysis Branch.

Please contact us if you require any discussion or clarification of the enclosed requests.

Sincerely,

Original signed by:
C. Stahle

for Steven A. Varga, Chief
Light Water Reactors Branch No. 4
Division of Project Management

Enclosure:
As stated

cc: See next page

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OFFICE	LWR#4: DPM	LWR#4:DPM				
SURNAME	DLynch/lk	SVarga				
DATE	5/17/79	5/17/79				

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cc:

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Mr. O. K. Earle
Licensing Engineer
P. O. Box 968
Richland, Washington 99352

220.0 Analysis Branch

222.0 Systems Analysis Section

222.01 (6.2.1) Describe in detail, how you evaluated the mass and energy release data during the complete blowdown phase (i.e., during the first 100 seconds) for a postulated break in the recirculation line and in the feedwater line. Describe all analytical models which you used, including your assumptions. If any hand calculations were performed, provide the detailed calculations.

222.02 Provide a detailed description of your analytical model to evaluate the mass and energy release rates for your analyses of the short-term annulus pressurization and the evaluation of the structural loads resulting from postulated pipe breaks for the first five seconds following the accident. Indicate the mass flux (LBM/sec-ft^2), the enthalpy (BTU/LBM) and the flow area (square feet) as a function of time for each side of the break. Justify all your assumptions. Describe the break geometry assumed throughout the transient. Discuss the overall conservatism of your analysis.

222.03 Describe in detail, how the long-term steaming rates were developed for the time period following a postulated loss-of-coolant accident (LOCA). If the steaming rates were developed by hand calculations, provide the details of your method and list your assumptions. Describe the break flow area as a function of time. Discuss the overall conservatism of your analysis.

222.04 Describe in detail, how you evaluated the mass and energy release rates for a postulated steam line break. Describe the reactor vessel liquid swelling model you assume to be applicable during the transition from single-phase to two-phase flow at the postulated break. Indicate all your assumptions and discuss the conservatism of your method of analysis.