NORTHWEST ENERGY SERVICES COMPANY

P.O. BOX 1090 • KIRKLAND, WASHINGTON 98033

March 2, 1982
NLN-21

Mr. M. W. Mallory
Project Manager
Licensing Branch #4
Division of Licensing, NRR
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attn: Mr. Harold Lefevre

Subject: Puget Sound Power & Light Company
Skagit/Hanford Nuclear Project, Units 1 & 2
Docket Nos. 50-522 and 50-523
Request for Additional Information

Dear Mr. Mallory:

With this letter we are sending you a copy of our conclusions regarding the presence of faulting on the southwest flank of the southeast anticline. This list of conclusions, which was informally requested by Mr. Lefevre in conversations with Jim Kearnes in Bethesda on February 11, 1982, enumerates by data line the bases for statements regarding the southeast anticline fault in Appendices 2K and 2R of the Skagit/Hanford Nuclear Project Preliminary Safety Analysis Report Amendment 23. Profiles of gravity data from lines 4B through 4F on the southeast anticline were sent to you under separate cover by the Weston Geophysical Corporation. These gravity profiles were informally requested by Dr. Ibrahim during a telephone conversation with Mr. Kearnes on February 18, 1982.

If you have any questions or require additional information, please call us.

Very truly yours,

F. A. Spangenberg

F. A. Spangenberg
Assistant Project Manager, Nuclear

Attach.
cc: H. Lefevre, NRC

C001
S/1 Add: M. W. Mallory

CONCLUSIONS RE SOUTHEAST ANTICLINE FAULT BASED ON DATA CONTAINED IN S/HNP PSAR (Amend. 23) APPENDIX 2K AND 2R

Line 3 — Although the Ringold section is thinned on trend with the fault interpreted on Lines 4A through 4C, the bedrock slope is relatively gentle ($5\frac{1}{2}^{o}$ to $6\frac{1}{2}^{o}$). Thus, there are no consistent data suggesting either the presence or absence of the fault. It has therefore, been conservatively assumed that the fault may extend as far to the northeast as Line 3.

Line 2 — A fault is inferred to be present on the bases of relatively steep bedrock slope ($8\frac{1}{2}^{o}$ to $10\frac{1}{2}^{o}$) and thinning of the Ringold formation on trend with the fault interpreted on lines 4A through 4C. Modeling of ground magnetic data indicates that a reverse fault dipping gently to the northeast is a permissible interpretation.

Line 1 — Although there is little or no evidence for the existence of the fault on Line 1, it is inferred to be present because of its inferred existence on adjacent lines.

Line 4A — A reverse fault is interpreted to be present on the basis of an anomolously thick section of Elephant Mountain basalt, shearing observed in core hole 125, a relatively steep bedrock surface (9^{o} to 15^{o}), and thinning of the Ringold formation. Ground magnetic anomoly "B" is observed to be coincident with the interpreted fault. Modeling of the ground magnetic data indicates that the fault probably dips gently to the NE.

Line 4B — A fault is inferred to be present on the bases of relatively steep bedrock slope ($6\frac{1}{2}^{o}$ to $10\frac{1}{2}^{o}$), thinning of the Ringold formation and the presence of ground magnetic anomoly "B".

Line 4C — A fault is inferred to be present but dying out to the southeast on the bases of relatively steep bedrock slope (8^{o}), decreased thinning of the Ringold section and the presence of a subdued ground magnetic anomoly "B".

Line 4D — Although Figure 2K-50 shows ground magnetic anomoly "B" on this line, this identification is extremely questionable. The fault is interpreted to be absent on this line on the basis of gentle and continuous bedrock slopes indicated by gravity.

Line 4E — The fault is interpreted to be absent. None of the available data indicate the existence of a fault.

Line 4F — The fault is interpreted to be absent. None of the available data indicate the existence of a fault.

SUMMARY: The fault recognized in core hole 125 on line 4A is interpreted dip gently to the northeast and to possibly be up to 4 miles in length extending from Line 3 to 4C.

This interpretation is conservative and consistent with previous statements in Appendices 2R and 2K to the S/HNP PSAR (Amend. 23).