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 AUTH. NAME AUTHOR AFFILIATION
 SORESEN, G. C. Washington Public Power Supply System
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SUBJECT: Submits addl info on interpretation formulated by DOE site
 characterization plan review team re facility geology data.
 Evidence cited by review team listed.

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U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Gentlemen:

Subject: HANFORD AREA GEOLOGY INFORMATION

The WNP-2 Safety Evaluation Report (NUREG-0892, Suppl. 1) at Page 2-1 states that "the staff has requested that the applicant maintain a continuing interaction with DOE and provide new information and interpretations to the staff." (SSER Section 2.5, Pg. 2.1).

This request was made because at that time, DOE contractors were actively pursuing site characterization work on the Hanford Reservation for a potential nuclear waste repository. The Supply System established contacts with the Operations Office of DOE and its contractors to comply with that request. Although site characterization work has been significantly reduced, DOE contractors have maintained a low level of work in reviewing previously obtained data. As a result of these reviews, the Supply System was recently contacted by a DOE representative and informed of a new interpretation of DOE geology data. In keeping with the SSER request, this information is being provided to the NRC staff.

The interpretation formulated by DOE's Site Characterization Plan (SCP) review team is based on the possible association of the Nancy aeromagnetic lineament with microearthquakes and evidence of faulting. Although direct association between the various pieces of information cannot be unequivocally established at this time, the spacial correlation is sufficient to make the interpretation of faulting plausible albeit speculative. The evidence cited by the review team is as follows:

1. "Nancy" Aeromagnetic Lineament - a northeast trending lineament identified in 1978 by Weston Geophysical Company working with aeromagnetic data gathered for the Supply System.

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2. Faulting has been interpreted on seismic reflection profiles where they cross the Nancy Lineament.
3. Slickensides (polished surfaces often associated with faulting) have been identified in Ringold Sediments in drill-hole DH-27, which is located along the lineament near the Yakima Barricade.
4. A cluster of microearthquakes known as the Coyote Rapids Swarm coincides with the northern end of the lineament. Epicenter alignments with northeast orientations are reported by the SCP authors.
5. A portion of the Columbia River in the northern part of the Hanford Reservation trends northeast and coincides with the northern extension of the Nancy Lineament.

The lines of evidence listed above have each been derived from different studies, conducted for different reasons, over the past ten years. The SCP review team has suggested for the first time that these facts could possibly be related, and has recommended to DOE that further investigations are merited.

In summary, the DOE interpretation concerns the association of previously unrelated geologic and seismic facts into a plausible but speculative hypothesis of faulting on the Hanford Reservation. Since this hypothetical structure is further away than the most distant design earthquake source for WNP-2, there is no reason to believe that this potential structure, even if its presence is confirmed, will in any way change the conclusions previously established regarding the seismic design of WNP-2.

As requested by the staff, the Supply System will continue its interaction with DOE and its contractors to determine the results of any further work in this area.

As noted above, it is the Supply System's position that even if this hypothesis is subsequently confirmed, the conclusions related to the seismic designs of WNP-2 will not change. The Supply System plans no work on this issue other than to maintain our awareness of the DOE activities.

Very truly yours,

G. C. Sorensen
for G. C. Sorensen, Manager
Regulatory Programs

cc: NS Reynolds/BCPR
RB Samworth/NRC



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