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MEMORANDUM FOR: Robert LaGrange, Section Leader
Engineering Branch
Division of BWR Licensing

DEC 30

FROM: Phyllis Sobel, Geophysicist
Engineering Branch
Division of BWR Licensing

SUBJECT: STATUS OF WNP-2 GEOSCIENCE ACTIVITIES

The following is a status of activities related to the WNP-2 site:

Mineral Leasing

On October 16, 1986 I was notified by Harold Lefevre, Geologist, NMSS that DOE has requested the Bureau of Land Management to open certain lands on the Hanford site to mineral leasing. WNP-2 is located within about 2,000 feet of these lands. The potential for oil, gas, and coal exploration is a new development since the OL-SER for WNP-2 was published in 1982. If exploration were to occur near the WNP-2 site, potential problems such as subsidence, fires and lethal gas clouds would have to be evaluated. Mr. Lefevre sent the information on mineral leasing to Mr. William Kiel, Washington Public Power Supply System (WPPSS) on October 23.

Since the land is not yet open to leasing, I suggested to Mr. Kiel that WPPSS consider the effects of possible future mining operations near the WNP-2 site. I also suggested the utility consider the possibility of controlling the mineral rights near the site. Mr. Kiel agreed and stated WPPSS would look into the issue and would also notify the Bureau of Land Management of any concerns WPPSS may have for mineral leasing near the WNP-2 site. In a November 13, 1986 memo from G. Lainas to E. Adensam, we suggested a meeting with WPPSS to discuss the mineral leasing issue. We would especially like to hear about any studies WPPSS has conducted to determine the extent of a buffer zone, where WPPSS would control the mineral rights around the WNP-2 site.

New Geological and Geophysical Information

In the WNP-2 SER Supplement No. 1 (August 1982) the staff requested the applicant continue interactions with DOE and provide new information and interpretations to the staff. Since 1982 there have been no meetings between WPPSS and NRC and no amendments to the FSAR on WNP-2 geological and seismological issues. Recently Dr. Burt Stiemmons (consultant to the NRC during the WNP-2 OL review) and Mr. Curtis Canard (a petroleum geologist consulting to the Nez Perce, Umatilla, and Yakima Indian Nation)

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have questioned the past assessments of geological structures near the WNP-2 site. I suggested to WPPSS that now may be a good time to reflect on recent geological and seismological developments and their possible impact on the WNP-2 seismic design earthquakes. The November 13 memo from Lainas to Adensam, mentioned above, suggested discussing these issues at a meeting between WPPSS, the NRC, Dr. Slemmons and possibly Mr. Canard. I envision the outcome of this meeting will be an updating of the FSAR. DSRO has a personal services contact with Dr. Slemmons that would cover his travel expenses to the meeting (Leon Reiter, DSRO, is the cognizant person).

Dr. Slemmons noted his concerns in a June 26, 1986 letter to Harold Denton. He has also submitted a draft proposal to LLNL (the DOE contractor for the BWIP site) for a remote sensing assessment of the Yakima Fold Belt (Figure). Dr. Slemmons is not comfortable with his maximum earthquake estimates for structures near the WNP-2 site and feels other geological structures should be checked for seismogenic potential. A change in the type of faulting could effect Dr. Slemmon's maximum magnitude estimates of structures such as the Rattlesnake-Wallula Alignment (RAW). In addition, capable structures within 20 km of the site could have been overlooked, since at the time of the OL review folds were not assumed to be seismogenic structures. Recently some earthquakes, such as Coalinga, California, illustrated the seismogenic potential of folds. Also Mr. Curtis Canard's interpretation of geophysical logs show faults that project closer to the WNP-2 site than the RAW. Identification of new seismogenic structures or an increase in previous maximum earthquake estimates could effect the WNP-2 seismic design spectra.

We should keep NMSS informed of meetings with WNP-2 since NMSS is reviewing the Environmental Assessment for the Reference Repository Location at the Hanford Site. My preliminary review of this report indicated that DOE is relying heavily on the WNP-2 SER and has not considered Dr. Slemmon's recent suggestions.

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