

WM BUCKET CONTROL
CENTERStrictly Private

Date: March 16, 1976

To: F. R. Dornheim

From: R. A. Deju

Subject: PROPOSAL FOR EVALUATION OF LEVELS OF
CONTAMINATION IN GROUND WATER NEAR
GABLE MOUNTAIN POND

Our studies of the geology underlying the pond areas and detail gravity work in this area have revealed the possibility of breaching of the basalts just under the subject pond. Figures 1 and 2 show two cross-sections through Gable Mountain Pond. Figure 3 shows the location of the wells used in making the cross-sections.

Recent studies on contamination of Gable Mountain Pond, West Lake, and the confined aquifers in the vicinity of these water bodies have revealed the presence of ¹²⁹I, ⁶⁰Co, ¹⁰⁶Ru, and other radiocontaminants in these waters. Table 1 (attached) shows a summary of the levels of contamination thus found and compares the results to levels found in the Columbia River.

In view of the potential disposal of Purex wastes to Gable Mountain Pond once the plant is restarted, I would recommend conducting a study to determine whether or not any contaminants from previous disposal operations into the pond have reached the confined aquifers. I also recommend determining how far below the surface of West Lake we find the Mabton Interbed Aquifer and whether or not this aquifer is connected to West Lake. The importance of this interbed lies in the fact that this is the aquifer used in most irrigation operations. I propose that we sample the structures shown in Figure 4 for the constituents listed in Table 2. I also propose that we drill a new core well near West Lake down to the Mabton Formation. Since we presently have a coring rig working at Hanford, I recommend that the existing coring contract be expanded to cover this additional well. Table 3 outlines the cost of conducting the additional work. The total cost

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WM Project

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N Coleman

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From: B Cook, NAE

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for the project would be approximately \$28,000. Utilizing some funds out of existing budgets, it would require additional funding in the order of \$21,000. The project can be completed within two calendar months of your authorization to start work.

RAD:tj

Att.