Battelle
Pacific Northwest Laboratories

Project Number_____

Internal Distribution

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Date November 29, 1983

To PE Bramson

From LS Prater Leigh

Subject Monthly Report - November 1983

Most of my time this month has been spent helping UNC to assess the effects of their new crib on the ground water. Each week, I have provided them with information on the changes in the depth to water in wells around the crib and in the temperature of samples collected from these wells. Very soon after they started using the crib, my water-level data showed that a relatively large mound was building up under the crib. In addition, UNC found that the level of effluent in the new crib was rising closer to the cover than anticipated. UNC was concerned that the raw water being added to the old crib for shielding was affecting the infiltration rate at the new crib. Based on the data I had collected, I told UNC that the relatively small volume of water being added to the old crib should not significantly impair the effectiveness of the new crib. However, to be safe, UNC felt compelled to shut off water to the old crib at the same time that they decreased discharges to the new crib. Shortly afterward, they finished installation of a flow meter on the effluent line and discovered that the discharge rate was currently about twice the normal rate. Within a week of decreasing the discharge rate, my measurements indicated that the water table in the vicinity of the new crib had fallen by almost one foot (in spite of the fact that UNC had again turned on the flow of raw water to the old crib). This week, however, the effluent stream had to be diverted back to the old crib because the new crib would not accept an unusually high discharge rate resulting from refueling operations. Evidently the new crib is capable of accepting the normal discharge rate but not much more. I will continue to help UNC to assess the situation, although they do complicate my analysis by making so many changes simultaneously!

I have been helping to acquaint Karen Oster with the Rockwell interval reports. The one we are currently drafting is a complicated one (three intervals combined in one report), so Karen and I are working very closely together on this one. Future reports should be more straightforward, allowing Karen to work more independently. Our progress on these reports has been fairly good; we have now finalized and delivered three reports, and another one is currently in peer review at Rockwell. With Karen's help, we should be able to crank the reports out faster.

Pam Mitchell of the GR&E Department conducted a demonstration of the CIRMIS programs for Vern Johnson, Mike Thompson, and Bob Elder of Rockwell to acquaint them with our ground-water data base and the services available to them.

I attended the annual meeting of the Geological Society of America with JT Rieger (who, by the way, gave an excellent presentation). As always, the meeting was a very good one. The most interesting (and controversial) session was the one on geologic disposal of high-level wastes. I was surprised by how much the interest in this issue has increased among members of the geologic community.

LSP:gd