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Project Number

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Date February 10, 1983

To PE Bramson

From JT Rieger JTR

Subject Perchloroethylene in the 300 Area Ground Water

As you are aware, I have been following the perchloroethylene spill which occurred November 4, 1982, in the 300 Area process sewer trenches. As far as we can tell from our data, the main contaminant plume in the ground water has moved generally south and east from the spill site, and has reached as far as the 331 Building, although at very low levels. Ecological Sciences personnel are concerned that the perchloroethylene might be harmful to their fish studies if levels in their supply well next to the 331 Building become too high.

On January 31, I talked with Tom Page of Ecological Sciences and told him that water samples taken January 24, 26 and 27 indicated that levels of perchloroethylene had risen slightly in wells 4-7, 4-10, and the 331 Building well. He and I agreed that as long as the levels were still quite low, there was no cause for immediate concern. The following day I received more data from samples collected on January 28 and 31 which showed that levels of perchloroethylene in the three wells had remained about the same. We will continue monitoring and I will keep Mr. Page informed in case concentrations increase and action needs to be taken.

In order to be prepared in the event action is needed to protect the water supply to the fish, we have considered several alternatives. One of these alternatives was to pump well 4-7 or 4-10 to divert the contaminated ground water away from the 331 well. However, some file-searching revealed that transmissivity is high in the area of these wells and drawdown, even at high pumping rates, is very small. This means that pumping of these wells would not appreciably affect the ground-water flow in this area. Therefore, this option was discarded. Another idea was to supply the fish in the 331 Building with an alternate source of water until perchloroethylene concentrations drop and the water is safe again. This alternate source could be either the river or a nearby well, such as 4-1 or 699-S27-E14. However, there are problems with this approach too. River water exposes the fish to many disease organisms, and a recent test shows that the most favorable well, 4-1, contains as much perchloroethylene as the 331 well. We are now checking on well 699-S27-E14 and the farm well to see if either of them can be used for our purpose.

JTR:gd

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