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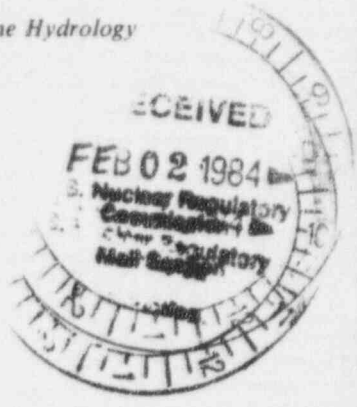
Hydrogeology • Mineral Resources Waste Management • Geological Engineering • Mine Hydrology

January 30, 1984



Mr. John Linehan
Uranium Recovery Field Office
U. S. Nuclear Regulatory Commission
P. O. Box 25325
Denver, Colorado 80225

Dear John:

The revised copy of our report on the Kerr-McGee "O" Sand aquifer analysis is enclosed. The report is self-explanatory with respect to all the subjects we addressed in Denver on January 18 except one. Kerr-McGee stated in the meeting on January 18 that pumping well OP-2 was air-lifted for four hours at the termination of drilling in order to check the response of Lower "O" Sand piezometer OMO-1. They stated that pumping well OP-2 was not deepened to the top of the "N" Sand because after four hours of air-lifting piezometer OMO-1 did not respond to the pumping. They concluded that this indicated an absence of hydraulic connection between the Lower "O" Sand and the Upper "O" Sand because of the low permeability of the Lower "O" Shale. During our revision of the enclosed report, we discovered some conflicting information with respect to this subject. Figure 29 in the Kerr-McGee report does in fact show the drawdown of the water level in piezometer OMO-1 to begin at between 500 and 600 minutes into the test. This time period is greater than the four hour air-lift test described by Kerr-McGee. However, inspection of the drawdown data show that this was not the initial response of well OMO-1 to the pumping test that we are analyzing. The well, in fact, began to respond at somewhere between 10 and 40 minutes into the test. Drawdown continued to about 250 minutes into the test and then for some unknown reason the water level began to rise. It continued to rise until approximately 580 minutes into the test, then began to fall again. Kerr-McGee ignored all the data prior to 600 minutes in the plot that is presented on Figure 29. They gave no justification for using the data at 600 minutes as being the initial response of piezometer OMO-1. They did indicate that the early time drawdown data were due to the Noordbergum rise. It should be pointed out however that this does not justify eliminating all the early portion of the time drawdown data. The implication of this observation is that piezometer OMO-1 in the Lower "O" Sand should have responded to the air-lift pumping, either positively or negatively.

If you have questions regarding the report or this letter, please call.

Sincerely,

Roy

Roy E. Williams
Ph.D. Hydrogeology
Registered in Idaho

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