



PUBLIC SERVICE COMPANY OF NEW MEXICO

ALVARADO SQUARE ALBUQUERQUE, NEW MEXICO 87158 _ _ _ _

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JUN 17 1985

HAZARDOUS WASTE SECTION

June 14, 1985

Mr. Peter Pache
Program Manager
Hazardous Waste Section
New Mexico Environmental
Improvement Division
Post Office Box 968
Santa Fe, NM 87503-0968

Dear Mr. Pache:

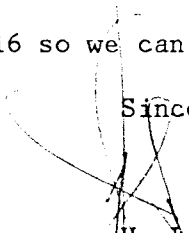
Subject: Full-Scale Pump Test
for Aquifer Properties
at Public Service
Company of New Mexico's
(PNM) Person Generating
Station

Field work for the full-scale pump test (i.e., Task 12 of Phase V as revised May 1, 1985) at Person Generating Station is scheduled to begin July 8, 1985. A preliminary design of the test is enclosed for review by the New Mexico Environmental Improvement Division (NMEID).

PNM's technical staff and its consultant would like to schedule a meeting with NMEID staff to discuss the pump test plan sometime during the period of June 25-28, 1985.

Please contact me at 848-2216 so we can arrange such a meeting.

Sincerely yours,


H. E. Plum
Regulatory Coordinator

KWK:slm

cc: Ms. A. Claassen, NMEID

PRELIMINARY DESIGN FOR FULL-SCALE PUMP TEST
AT PERSON GENERATING STATION

Location of Test

Approximately midway between the waste solvent tank and monitor well PSMW-6; i.e., about 300 feet northeast from tank and about 300 feet southwest (see attached map) of PSMW-6.

Construction of Pumped Well

The initial well will be installed by rotary drilling through the unsaturated zone to just above the water table. Temporary casing will be installed in the hole and all drilling fluid will be removed. A hollow-stem auger rig, equipped with a continuous sampler, will then be used to obtain 2.5-foot soil cores through the top 20 feet of the saturated zone. These saturated soil samples will be geologically described and analyzed for tetrachloroethylene, ethylene, 1,1-dichloroethylene, and 1,1,1-trichloroethane. Such soil sampling will provide more detail on the characteristics of geological material at the water table and on the vertical distribution of solvents in the top 20 feet of the saturated zone.

After completion of soil sampling, a 4-inch diameter, 20-foot section of stainless steel well screen will be inserted into the hole. The riser pipe between the well screen and ground level will be 4-inch diameter black steel. The well will be developed by air surging and a submersible pump will be installed. A short duration pump test will then be done on this well to assist in locating observation wells.

Construction of Two Observation Wells

The exact distance between the pumped well and observation wells will be determined after a short duration test on the pumped well. It is expected that the distance from the pumped well to the first observation well will be about 10 feet, and the distance between the first observation well and the second observation well will also be about 10 feet. All three wells will be on a straight line.

The observation wells will be installed by rotary drilling through the unsaturated zone, and air drilling into the top 20 feet of the saturated zone. A 2-inch diameter, 20-foot section of well screen, attached to 2-inch diameter galvanized riser pipe, will be pushed into the top 20 feet of the saturated zone. The wells will be developed by air surging or bailing.

Pump Test

The 4-inch well will be pumped at a rate to produce a nominal drawdown of 60 to 75 percent of the screened interval below the water table in the pumped well. It is expected that this pumping rate will be about 5 to 10 gpm.

Constant rate pumping will then occur for a period of 72 to 96 hours, and drawdown will be monitored in the pumped well and two observation wells. Recovery will be monitored in the wells for an equivalent time period once pumping is terminated.

Analysis of Test Results

Standard procedures will be used to analyze the pump test results to calculate transmissivity and storativity.

