



STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020
STEVEN ASHER, Director

ROBERT M. NEILL
SECRETARY

ROBERT L. LOVATO, M.A.P.A.
DEPUTY SECRETARY

JOSEPH F. JOHNSON
DEPUTY SECRETARY

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

February 16, 1984

Mr. Richard A. Jordan, Manager
Regulatory Licensing and Compliance
Public Service Company of New Mexico
Alvarado Square
Albuquerque, NM 87158

RE: PNM-Person Generation Station, Proposed Ground Water Monitoring

Dear Mr. Jordan:

The Environmental Improvement Division (EID) has received your letter of January 20, 1984, in which you discussed proposed Phase III core sampling and the design and installation of the three ground water monitoring wells. Mr. Raymond Sisneros, of the Hazardous Waste Section, contacted PNM by telephone on January 30, 1984, with respect to the Phase III core sampling. Regarding the ground water monitoring proposal, EID generally concurs with the methodology but has several comments and questions that should be addressed by PNM to ensure maximum worth of the data collected:

1. PNM indicates on page 2 of the letter that approximately 20 feet of screened casing beginning at the water table will be open to the saturated zone for sampling. This long length of screened casing should provide sufficient depth below the water table to provide long term capability to detect any contamination. However, at this time sampling should be performed so as to obtain a water quality sample that is representative of the top 5 to 7 feet of the water table where contamination, if any, is likely located. If the well is open over the entire 20 feet and if any sediment stratification occurs such that water that enters the well comes from a more permeable layer at depth, upper zone contamination might not be detected. PNM should sample at discrete intervals (5 to 7 feet each) by use of an inflatable packer or some other effective method to obtain representative samples for each interval.
2. Was bentonite placed at the bottom of the open hole prior to backfill to prevent possible fluid movement to the water table if water happens to migrate downward along the casing wall? To what depth was the

Richard A. Jordan
February 16, 1984
Page 2

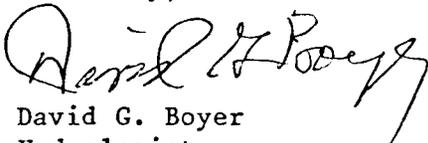
concrete surrounding the casing placed? Was the concrete at the casing top elevated to divert runoff?

3. The bailer should be steam cleaned between sampling of different wells.
4. To detect small changes in the gradient, the top of each well should be surveyed to obtain an accurate topographic elevation.
5. No schedule was proposed by PNM for frequency of water level measurements. If pumping wells are closeby, their pumping schedules could have an effect on the direction and amount of the gradient. Other fluctuations may occur due to diurnal effects and responses due to delayed drawdown as sediments affected by a pumping cone of depression drain. Frequent measurements taken at the same time of day are recommended. A continuous water level recorder may be useful if individual water level measurements indicate frequent fluctuations or gradient reversal.
6. Plume movement in the unsaturated zone appears to be to the northwest, and the three ground water monitoring wells are north, southeast and southwest of the disposal location. Because of this, the need for PNM to install additional ground water monitoring wells in the future (including one to the northwest and/or at the point of disposal) cannot be precluded since all results of the current unsaturated zone coring program and ground water monitoring have not been submitted nor evaluated.

The EID is reviewing the technical aspects of the vadose zone discussion provided in PNM's Phase I Summary (dated December 29, 1983) and comments (if any) should be provided by February 20, 1984.

If you have any questions on these ground water monitoring comments, please contact me at the above address and telephone number (ext. 303). Questions regarding the Hazardous Waste Regulations should be addressed to Mr. Boyd Hamilton (ext. 340).

Sincerely,



David G. Boyer
Hydrologist
Ground Water Section

DGB:egr

cc: Boyd Hamilton, EID Hazardous Waste Section
Richard Mitzelfelt, EID District I, Manager

mss