

STATE OF NEW MEXICO

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

23 July 1984

CERTIFIED MAIL: RETURN RECEIPT REQUESTED

NOTICE OF VIOLATION

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

RE: PNM Person Generating Station  
EPA ID #NMT360010342

Dear Mr. Jordan:

The New Mexico Environmental Improvement Division (EID) has received your letter to Anthony Drypolcher, dated June 4, 1984, and the attached report, "Ground Water Investigations, PNM Person Generating Station". The Hazardous Waste Section has reviewed that document and the prior submittals by PNM regarding the disposal of hazardous waste(s) at Person Generating Station. The purpose of this letter is to notify Public Service Company of New Mexico (PNM) that Person Generating Station remains in violation of the New Mexico Hazardous Waste Management Regulations (HWMR-2), and to require PNM to comply with HWMR-2 and the Hazardous Waste Act. The Ground Water Section is also requesting responses to comments in the attached memorandum.

The nature of PNM's violations was outlined in a letter addressed to Mr. Jack Rex of PNM on November 9, 1983. That letter required PNM either to remove all contaminated materials or to comply with Sections 206.B., 206.D., and Part III of HWMR-2. The Hazardous Waste Section has determined that the subsequent investigations by PNM have provided sufficient information so that PNM may now proceed with direct measures to comply with HWMR-2.

Therefore, within 30 days of receipt of this letter, PNM must submit a closure/post-closure plan for the facility which meets the requirements of Section 206.D.2., and a plan for a ground-water corrective action program which will meet the requirements of Section 206.D.1.k.

Closure of the facility may be either by removal of contaminated material or by capping and post-closure care. A concept for removal was submitted by you with a letter to Anthony Drypolcher, dated March 2, 1984. The basic elements of that removal plan would be acceptable to the Hazardous Waste Section, although we

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would require transport of the soil to an appropriate disposal site, rather than land treatment (which would require a permit).

Whether or not you close by removal, ground-water corrective action will be required, along with monitoring to evaluate the effectiveness of the correction program. Your submittal should include a schedule for implementation of the corrective action program.

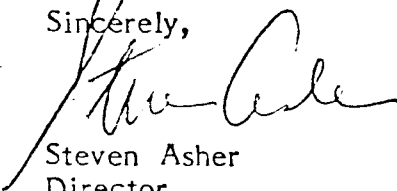
We appreciate the excellent effort you have put forth to date, and we trust that you will comply with the requirements of this letter. However, if you do not comply, you shall be subject to one or more of the following:

- (1) an order requiring compliance within a specified period, pursuant to 74-4-10 NMSA 1978;
- (2) a civil action in district court for appropriate relief, including a temporary or permanent injunction, pursuant to 74-4-10 NMSA 1978; and
- (3) the assessment of civil penalties up to \$10,000 per violation for each day of continued non-compliance, pursuant to 74-4-12 NMSA 1978.

Compliance with the requirements of this notice does not relieve PNM of its obligation to comply with the HMWR-2 in other activities which it carries on, nor does it relieve PNM of its obligation to comply with other applicable laws and regulations.

Please direct your response to Mr. Peter H. Pache, Program Manager, Hazardous Waste Section, NMEID, Crown Building, P.O. Box 968, Santa Fe, New Mexico 87504. If you have any questions regarding this notice, contact Mr. Pache or Ms Ann Claassen at the same address or by calling (505) 984-0020, extension 340.

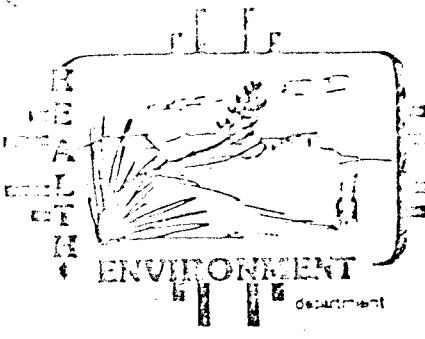
Sincerely,



Steven Asher  
Director

SA:AC:clm

cc: ~~Maxine Goad - EID - Ground Water Section~~  
Richard Perkins - EID - Ground Water Surveillance Section  
Richard Mitzelfelt - EID - District I  
Joe Gmuca - EID - Legal  
Susan Stark - EPA - Dallas



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MEMORANDUM

TO: Richard Jordan, Manager, Regulatory Licensing and Compliance, Public Service Company of New Mexico.

THRU: Anthony Drypolcher, Bureau Chief, Ground Water/Hazardous Waste Bureau *AR*

THRU: Maxine S. Goad, Program Manager, Ground Water Section *MSG*

FROM: Joel Hubbell, Water Resource Specialist, Ground Water Section *JH.*

SUBJ: Public Service Company of New Mexico (PNM) Person Station

DATE: July 16, 1984

The June 1, 1984, report "Ground Water Investigations PNM Person Generating Station" has been reviewed by Dave Boyer, Joel Hubbell and Kevin Lambert of the EID's Ground Water Section staff. It is obvious from our review of the material that additional on-site hydrogeologic investigation must be undertaken to define the character and extent of contamination in the aquifer. PNM's assertion (in their June 4, 1984, cover letter to the July 1, 1984, report) "that the effects of the spill are very localized" has yet to be demonstrated. As the plume is being more clearly defined, PNM should continue investigating remedial actions which may be appropriate for restoration of the aquifer.

Our conclusion that additional hydrogeologic information is required is based on the following information presented in the report:

1. Resampling of monitoring wells 1, 2 and 3 show continued high levels of 1,1,2,2 tetrachloroethylene (PCE), 1,1-dichloroethylene (DCE) and 1,1,1-trichloroethane (TCA). For the latest sampling, levels for PCE are 25 to 150 times greater than the WQCC established limit (20 ppb) for ground water and DCE levels are 40 to 300 times the WQCC limit (5 ppb). Though no WQCC numerical limits have been established for TCA, levels in the latest sampling range from 1,500 to almost 10,000 ppb.
2. Samples from newly drilled monitoring wells placed at the four corners of PNM's property detected no TCA, PCE, or DCE contamination except for well PSMW-6 at the northeast boundary. This indicates that contamination in wells 1, 2 and 3 is not part of a regional ground water problem.
3. PCE levels in well PSMW-6 were about twice the WQCC limit, while DCE ranged from about 2 to 3 times the WQCC limit. TCA levels were less than 10 ppb. Possible reasons for contamination in well PSMW-6 have not been presented by PNM. Visual observation by EID staff of a topographically low drainage near well PSMW-6 and

within PNM's fence shows an indication of past disposal practices, including surface soils being discolored and having an oily appearance when disturbed. Old machinery, equipment and scrap material (including drums) were also present in that area. Additionally, several drawings in attachment 7 of PNM's June 14, 1984, submittal to EPA show a septic tank/leach field, a washing and cleaning area, and a old wastewater pond (not in service) in that area. Therefore, contamination in well PSMW-6 may possibly be due to past PNM surface and/or subsurface disposal practices near that well, movement of fluids from PNM's "injection well" at the shop, or past disposal practices in the arroyo outside PNM's fence line.

4. Water level elevations measured April 9 and May 1, 1984, show a hydraulic gradient of between 0.005 and 0.009 in a direction slightly south of east (Figure 3-2, 3-3). There are no monitoring wells east of PSMW-1 to delineate the extent of plume movement down hydraulic gradient from the "injection well." The extent of plume movement is unknown.
5. The potential exists for rapid ground water movement at this site. An average ground water flow velocity of 0.6 feet per day or about 215 feet per year is derived with the Darcy equation. This was calculated using a  $K_{sat} = 0.008$  cm/sec,  $I = 0.0092$  and a porosity of 35%. Ground water movement is estimated to be 1,500 feet for the seven years the tank was in use. PNM's property line in the direction of ground water movement is about 530 feet (Figure 3-3). The velocity of contaminants at this site will undoubtedly differ from the actual ground water velocity; however, there is a potential for contaminants to have already moved off of PNM's property.
6. Densities of the organic chemicals found at this site range from about 1.22 to 1.62 gm/cm<sup>3</sup>. Thus, the extent of downward vertical movement of contamination needs to be defined as well as its lateral extent.

#### Comments and Questions for PNM to Answer

1. PNM states on page 1.1 "that liquid phase movement of the organic compounds existing in the soil is not possible." We cannot agree with this statement. Analyses of soil samples taken from this site indicated the soil moisture was so low that only insignificant contaminant transport would occur. If the soil moisture content increases then there will be transport of contaminants toward the water table. During joint sampling April 9-11, Mr. Boyer observed water from the steam cleaning and washing operation running off the concrete pad between the "injection well" site and PSMW-2. Coincidentally, April TCA, PCE and DCE contaminant levels in PSMW-2 were found to be 2 to 3 times higher than in the February sampling. We are concerned that washing activities and/or precipitation runoff may increase moisture contents in the soil and increase the potential for further downward contaminant movement.
2. Assaigai's analytical results for PSMW-1, 2 and 3 dated February 13, 17, 18 and 19, 1984, differ significantly from Radian's February 13, 1984 sampling results. Also, Assaigai's results on those dates are lower than Assaigai's results from the April 10 and 11 sampling. What caused the large difference in analytical results between these samples? Has Assaigai changed its analytical procedures to cause this difference in results?

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3. When samples were collected for moisture analysis they were sealed in plastic bags and mason jars to prevent moisture loss. Did the soil samples completely fill these containers? If not, what was done to insure that moisture did not move into the voids, reducing the measured moisture content? How long of a delay was there between collection of the sample and determination of soil moisture? What sort of moisture losses are anticipated using your sampling methodology?
4. Analyses from PSMW-3 (p. 4-3) from Radian and Assagai shows a large variation in organic contamination for the the February 13, 1984 samplings. If the Radian results are correct then there was a significant decrease in organic concentrations from February to April 1984. If a decrease did occur in PSMW-3, a possible reason for the decrease may be that less contaminated ground water replaced the large volume (850 gallons) of water removed after initial sampling in the February 17 and 19, 1984, bailing test. By contrast, development of other wells removed only 11 to 25 gallons of water.
5. Results of the April analyses of monitoring well samples from State Laboratory Division (copies enclosed) show generally good comparison with results from PNM's contract laboratories. Major differences were with TCA and PCE analyses for PSMW-3 (SLD results about 1/2 to 1/3 those of Assagai and RMA) and nitrate analyses for PSMW-1 and 2 (SLD analyses 17.8 and 12.2 respectively while CEP reported 3.7 and 5.7 for these wells). Additionally, SLD performed heavy metal analyses for all monitoring wells.
6. The map in Attachment 2 of PNM's June 14, 1984, submittal to EPA shows the location of an impoundment, a washing/cleaning area and a leach field all located north of the maintenance shop.

Impoundment: Please describe the quality of fluids it held, where the fluids came from, the period of usage, the volume of fluids contained in it and flow rates into the pond.

Washing/cleaning area: Please describe period of usage, materials washed and cleaned, solvents used, estimated quantity and quality of waste solution discharged from this area and where waste from this area were ultimately disposed.

Leach field: Please describe period of usage, approximate flow rate and describe all wastes that enter the leach field which are not domestic (household) wastes.

This information is being requested to help define other waste disposal practices at this site which may affect or have affected the hydrogeology of this site.

We wish to commend you and your consultants on the methodology and procedures used in obtaining data to compile your Phase IV (June 1) report. We appreciate your efforts to obtain the best available data for this site.

DGB:JH:eg:

Enclosures