



**PUBLIC SERVICE COMPANY OF NEW MEXICO**

ALVARADO SQUARE ALBUQUERQUE, NEW MEXICO 87158 \_ \_ \_ \_

August 14, 1984

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

Dear Mr. Pache:

Subject: Person Generating Station  
August 2, 1984 Meeting Minutes

On August 2, 1984, members of your staff met with PNM to discuss what response was needed for the Person Generating Station Notice of Violation received by PNM July 27, 1984. The minutes of this meeting are enclosed as Attachment 1.

During the course of this meeting, discussion of questions raised by groundwater staff in the attachment to the NOV were addressed. PNM's written responses to these questions can be found as Attachment 2.

If you have any questions, please contact me.

Very truly yours,

L. Plum, Regulatory Coordinator  
Regulatory Licensing and Compliance

JP:wp  
Enclosures

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HAZARDOUS WASTE SECTION

ATTACHMENT 1

Distribution

August 14, 1984

Jody Plum

Person Generating Station - August 2, 1984 Meeting Minutes

On August 2, 1984, staff members from New Mexico Environmental Improvement Division (NMEID) and Public Service Company of New Mexico (PNM) met to discuss the Notice of Violation (NOV) received by PNM for Person Generation Station, July 27, 1984. Those present at the meeting were as follows:

Ann Clausen - NMEID	Kent Kantz - PNM
Kevin Lambert - NMEID	Russ Erbes - PNM
Joel Hubbell - NMEID	Bill Glover - PNM
Boyd Hamilton - NMEID	Jody Plum - PNM

Ann Clausen indicated that the desired response to the NOV would provide a plan for corrective action to cleanup groundwater and prevent further contamination of groundwater by contaminated soil; a plan for closure of the facility; a plan for post closure care of the facility; a proposed schedule for remedial action to be taken and contingencies. The period of continued groundwater monitoring required by NMEID was indicated to depend upon the effectiveness of the proposed corrective action and the method of closure agreed upon with PNM.

Bill Glover requested NMEID define the level of cleanup for soil and groundwater that would be acceptable. Ann Clausen indicated that removal of the more highly contaminated soil was desirable but not necessarily mandatory. Shipment of this soil to an EPA permitted hazardous waste landfill was considered the best disposal option. Jody Plum did, however, ask if it may be possible to dispose of this soil in a landfill in New Mexico. Ms. Clausen indicated that this possibility would be reviewed.

Joel Hubbell and Ann Clausen both stated that cleanup of groundwater to or below groundwater standards was desired by NMEID. Jody Plum noted that due to the concentrations found in the groundwater, the technology for treatment may be limited in its ability to remove this contamination. Bill Glover stated a review of the various methods of cleanup was being conducted.

Ann Clausen and Joel Hubbell indicated greater definition of the groundwater contamination plume is desired by NMEID. Russ Erbes suggested that modeling may provide a good idea of the vertical contamination. Ms. Clausen said any modeling would need to be substantiated by monitoring wells. However, she stated NMEID has no preference to models used should PNM decide on this approach. Kent Kantz indicated that the Environmental Protection Agency (EPA) is using soil gas analysis to

evaluate contaminant plumes. Ms. Clausen indicated this may be an acceptable alternative to placement of a great many additional monitoring wells if this technique has proven accuracy but that the need for additional monitoring wells is anticipated by NMEID. NMEID staff indicated that additional empirical data are desired and development of this data should be part of any plan of action submitted.

Russ Erbes asked what were the boundaries NMEID expected PNM to use in determining the area of groundwater contamination. Ms. Clausen responded that this work could be limited to within the property boundaries of Person Generating Station.

A discussion of technical issues surrounding groundwater monitoring well design generally faulted the use of "packers" finding dedicated groundwater wells for specific depths more reliable.

Ann Clausen stated that NMEID should be expected to split samples with PNM at various times during future activity on a nonscheduled basis.

PNM left the meeting with the understanding that it should:

1. Provide NMEID plans for corrective action, closure, and post closure care of the subject facility.
2. Develop a scenario for defining the plume of groundwater contamination (horizontal and vertical) and what treatment technology is available and appropriate.
3. Indicate as part of any plan that work will begin within X days of NMEID acceptance of each step outlined in the proposal.
4. That flexibility in the plans is allowed and expected by NMEID; changes in plans as developed are permissible; and that NMEID realizes that any restoration plan must be very flexible.
5. Several different lines of scheduling are acceptable to allow for changes based upon investigations carried out.
6. Notice of intent of closure/post closure is to be presented to NMEID with the submission of plans of action to be taken.

We also discussed questions posed by NMEID in the NOV. PNM indicated that written response to these questions should be forthcoming. Joel Hubbell indicated the reason for these questions was clarification of information submitted.

Jody Plum stated that meeting minutes would be submitted to NMEID to confirm topics of discussion. There being no further need for discussion, the meeting was adjourned.



Jody Plum, Regulatory Coordinator  
Regulatory Licensing and Compliance

JP:wp

Distribution: Russ Erbes/Kent Kantz - 0248  
Tony Hurst/Nancy Norem - 0160  
Richard Jordan - 0109  
Ed Kist - 0248  
Randy Ransdell - 0126

## ATTACHMENT 2

As part of the July 23, 1984 Notice of Violation for Person Generating Station, NMEID memorandum dated July 16, 1984 containing six questions were attached. PNM's responses to these questions are as follows.

### 1. EID Comment

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-1. 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.

PNM Response: Any recent runoff in the area has likely infiltrated no more than few feet into the soil. Due to the limited usage of the steam cleaner, it is not considered to be a significant input to soil moisture in the waste tank area. The observed increase in contaminant levels between February and April 1984 at PSMW-2 is considered to be related primarily to sampling and analytical variability. It is also possible that such concentration fluctuations are influenced by small-scale plume dynamics in the area near the waste tank.

### 2. EID Comment

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?

PNM Response: Assaigai Analytical Laboratory believes that differences between their results and Radian results for the February 1984 samples are related to holding times. Radian analyzed the samples within a few days of collection, whereas Assaigai performed the analyses approximately 7 to 10 days following collection. For the April samples, Assaigai performed the analyses within a few days of collection. Assaigai's analytical procedures have not changed.

3. EID Comment

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 area anticipated using your sampling methodology?

PNM Response: Soil samples were collected in "whirlpak" plastic bags. During bag closure, air was "squeezed" out to minimize void space in the bag. This bag was then enclosed and sealed in a second "whirlpak". These double bagged samples were then stored in sealed mason jars. Soil moistures were measured in the laboratory within a few days of sample collection. The entire bagged sample was weighed, then the entire bagged sample was dried and reweighed to determine moisture content. Unaccounted moisture losses using the procedure can not be significant.

4. EID Comment

Analyses from PSMW-3 (p.4-3) from Radian and Assagai shows a large variation in organic contamination for 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, 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, 1983, bailing test. By contrast, development of other wells removed only 11 to 25 gallons of water.

PNM Response: As stated in the response to comment #1, it is possible that sampling and analytical variability could be significant factors causing variability in contamination concentrations at a well over time. Large variability in concentrations of volatile organics has also been observed at NMEID monitor wells in Albuquerque's South Valley (see D. M. McQuillan's report on Water Quality concerns in the Albuquerque South Valley). With respect to the extended bailing study at PSMW-3 (results are in Appendix B of the Geoscience Consultants' report dated June 1, 1984), 300 gallons (not 85. gallons) were bailed from the monitor well (i.e., the volumes listed on the analytical report sheet are running totals for each sampling date). Results of the bailing study indicated that drawdowns created by bailing did not noticeably affect contaminant concentrations measured during the study. Although it may be possible that bailing of PSMW-3 had some influence on subsequent contaminant concentrations measured at the well, it is believed that sampling and analytical variability and plume

dynamics are more important factors affecting measured contaminant concentrations in monitor wells near the waste tank.

5. EID Comment

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.

PNM Response: It is possible that typical sampling and analytical variability can cause such differences in concentrations reported by the various laboratories. Large interlab variability has been observed at NMEID wells in Albuquerque's South Valley (see D. M. McQuillan's report on Water Quality Concerns in the Albuquerque South Valley). The observed differences are, therefore, not thought to be significant.

6. The map in Attachment 2 of PNM June 14, 1984, submittal to EPA shows location of impoundment washing and cleaning area, and a leach field all located north of the Maintenance Shop.

EID Question Impoundment: Describe quality of fluids held, where they came from, period of use, volume of fluids contained, and flow rates.

a. PNM Response

In Appendix 7 of the referenced transmittal, it is shown that in 1975 the pond was abandoned and drained. The pond was used to accumulate surface run off, cooling tower overflow, and boiler blowdown. The tower overflow could occasionally exceed 100 gpm for short periods but was normally zero. The boiler blowdown will be approximately five gallons per kWh.

Water Quality was exactly the same as is delivered to the nearby irrigation pond today.

EID Question 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.

- b. PNM Response Washing/Cleaning Area: This area was used for general maintenance cleaning of equipment until 1975. The flow into this area was controlled by the maintenance activity at the plant. The materials used for cleaning

were mainly water, kerosene, and Stoddard solvent. It is difficult to quantify what volume of waste was generated in this cleaning process. It is believed that the volume of oil and grease disposed of per year in this area would not exceed 100 gallons per year.

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.

- c. PNM Response Leach Field: Appendix 7 also shows this leach field services Units 3 and 4. The total sewage is essentially divided between this field and the one shown on the south of the plant. To our knowledge, the only wastes that entered this field from the plant was domestic sewage.