



New Mexico Health and Environment Department

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GARREY CARRUTHERS  
Governor

DENNIS BOYD  
Secretary

MICHAEL J. BURKHART  
Deputy Secretary

RICHARD MITZELFELT  
Director

January 11, 1990

SENT 1/16/90

Mr. Jody Plum,  
Senior Regulatory, Coordinator  
Public Service Company of New Mexico  
Alvarado Square  
Albuquerque, NM 87158

RE: ADMINISTRATIVE ORDER  
NMT360010342

Dear Mr. Plum:

Enclosed herein is an ADMINISTRATIVE ORDER issued to the Public Service Company of New Mexico (PNM) pursuant to the New Mexico Hazardous Waste Act, Section 74-4-10.1 NMSA 1978 (1989 Repl.Pamp.). The Administrative Order states that PNM's Person Generating Station facility may present a danger to the public health and the environment and directs PNM to submit a proposal for assessing the hazards presented by PNM's Person facility.

The Administrative Order sets forth a schedule of compliance (Attachment A). PNM must submit either the attached compliance schedule or a revised version within thirty (30) days of the receipt of this Order. PNM may be subject to additional civil penalties of up to five thousand dollars (\$5,000) per day for failure to comply with this Order, as set forth in Section 74-4-10.1.E. NMSA 1978 (1989 Repl.Pamp.).

Inquiries should be directed to Tracy Hughes (505) 827-2987.

Sincerely,

  
Kirkland Jones, PhD  
Deputy Director  
Environmental Improvement Division

KJ/bs

cc: Ron Johnson, PNM  
Dan Vigil, Acting District I Manager  
xc: Tracy Hughes, Office of General Counsel, HED



New Mexico Health and Environment Department

STATE OF NEW MEXICO  
ENVIRONMENTAL IMPROVEMENT DIVISION  
HEALTH AND ENVIRONMENT DEPARTMENT

GARREY CARRUTHERS  
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Director

IN THE MATTER OF:  
PUBLIC SERVICE COMPANY  
OF NEW MEXICO

ADMINISTRATIVE ORDER  
REQUIRING TESTING AND ANALYSIS

This Administrative Order is issued to the Public Service Company of New Mexico, pursuant to the New Mexico Hazardous Waste Act ("HWA"), §74-4-10.1.A NMSA 1978. The authority to issue this Order has been delegated by the Director of the Environmental Improvement Division ("EID") of the New Mexico Health and Environment Department to the EID Deputy Director, Waste Management.

FINDINGS

1. Public Service Company of New Mexico is a corporation incorporated in the State of New Mexico and located at Alvarado Square, Albuquerque, New Mexico. Public Service Company owns Person Generating Station ("PNM") located at the northeast corner of Broadway and Rio Bravo Boulevards, Albuquerque, New Mexico. This property includes a Hazardous Waste Storage Facility .

2. PNM is a gas-fired plant constructed in the 1950's. In June of 1986, PNM was taken out of service and put on "stand-by" mode.

3. PNM was issued a Hazardous Waste Management Post Closure Care Permit by EID on August 30, 1988.

4. On April 26-27, 1989, EID conducted a Comprehensive Groundwater Monitoring Evaluation.

5. Based on that inspection, EID noted significant deficiencies in the PNM post closure care permit. Hazardous constituent contamination of the groundwater was also noted.

6. Groundwater plumes significantly above New Mexico Water Quality Control Commission standards have moved beyond PNM's site boundary. Components of the plume are known to be chromium, lead, 1,1,1-trichloroethane, tetrachloroethylene and 1,1-dichloroethane.

7. The current vertical and horizontal boundaries of these plumes are unknown. A vertical component of hydraulic gradient at or near the hazardous waste management unit may indicate an unmonitored preferential pathway for migration of hazardous constituents into the deeper aquifer.

8. EID considers this situation serious and it may present a danger to the public health and the environment.

#### DETERMINATION

7. Hazardous waste is present and is, or has been handled, treated, stored or disposed of at PNM. The presence or release of hazardous waste at, or from PNM may present a substantial hazard to human health or the environment.

8. The Deputy Director has determined that the Technical Schedule, which is attached as Attachment A, under the terms of this Order is reasonable and necessary in order to ascertain the

nature and extent of the substantial hazard to human health or the environment that may be present at PNM.

ORDER

1. PNM is ordered, at its own expense to comply with the Technical Schedule, Attachment A.

2. In accordance with §74-4-10.1.C NMSA 1978, PNM shall submit a proposal for carrying out the Technical Schedule within thirty (30) days from the issuance of this Order.

3. PNM may confer with ~~EID~~ respecting the proposal in accordance with §74-4-10.1.C NMSA 1978.

4. If EID determines that PNM is not able to conduct the activities required by this Order in a satisfactory manner, is not able to conduct the activities contained in the EID approved proposal, or if action carried out are deemed unsatisfactory, EID may conduct such actions deemed reasonable by EID to ascertain the nature and extent of the hazard at the property and/facility of PNM. PNM may then be ordered to reimburse EID for the cost of such activity pursuant to §74-4-10.1.D NMSA 1978.

5. PNM shall provide access to its property and/or its facility to EID employees, contractors and consultants at all reasonable times and shall permit such persons to be present and move freely in the areas in which any work is being conducted pursuant to this Order.

6. PNM shall insure that all actions required by this Order are undertaken in compliance with all applicable federal, state and local laws.

7. Routine communications may be exchanged verbally, in

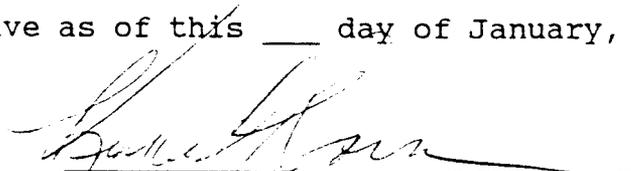
person or by telephone, between the parties to facilitate the orderly conduct of work required by this Order, but no such communication shall alter or waive any rights and/or obligations of the parties under this Order.

8. PNM is advised that EID may, in accordance with §74-4-10.1.E NMSA 1978, commence a civil action in the district court if PNM fails or refuses to comply with this Order. Such court shall have jurisdiction to require compliance with this Order and to assess a civil penalty of up to \$5,000 per day if such failure or refusal occurs.

9. Nothing contained in this Order shall be construed as limiting any rights or authority that EID may now, or hereafter, have under the Hazardous Waste Act or any other law, statute or regulation. EID specifically reserves the right to take appropriate removal, remedial cost recovery and/or enforcement action pursuant to any law, statute or regulation, including, but not limited to the right to seek and obtain civil relief and/or penalties for any violation of law or this Order.

10. This Order shall terminate when PNM certifies that all requirements of this Order have been completed, and EID has approved such certification.

Dated, entered, and effective as of this \_\_\_ day of January, 1990.



KIRKLAND L. JONES, PhD  
Deputy Director, Waste Management  
Environmental Improvement Division  
Health and Environment Department

Attachment A

**Technical Schedule  
Public Service Company of New Mexico  
Person Generating Station**

Item No.	Days to Completion	Action
1	1	PNM adopts EID's sampling and analysis plan.
2	30	As this action has been taken under Section 74-4-10.1.A.(2) NMSA 1978 (1989 Supp.), PNM has 30 days from the receipt of the Order to submit to EID its proposal for carrying out the required monitoring testing, analysis and reporting required by the Order. PNM's proposal may be a revised version of this schedule.
✓ 3	30	PNM submits the results of a comprehensive survey to include the locations, screened depths and annual production volume of all domestic and public water wells which supply water for human consumption or agricultural use and which are within a one-mile radius of the Person's Generation Station. <i>Maybe change this to 2 mile radius.</i>
4	30	PNM submits documentation to support the appropriateness of the mathematical model it used to calculate the hydraulic conductivity at the Person Station site. Complete documentation must at least include: <ol style="list-style-type: none"> <li>1. Assumptions of the mathematical model regarding the aquifer.</li> <li>2. Demonstrations that the assumptions of the model apply to the Person Station site.</li> <li>3. A listing of text references including any excerpts from the references which are essential to documenting the appropriateness of the model.</li> </ol>
5	60	EID receives PNM's proposal for assessing the rate and extent of hazardous constituent migration, both on- and offsite. A complete proposal must address the following areas: <ol style="list-style-type: none"> <li>A. A characterization of the uppermost aquifer which must at a minimum include:</li> </ol>

Item No.	Days to Completion	Action
5.A (cont)		<ol style="list-style-type: none"> <li>1) Flow nets (if a vertical gradient is identified). Flow nets are defined here as stratigraphic cross sections showing vertical flow lines. Each flow net diagram should include the location and name of each well, the location of all well screens, the stratigraphy of the subsurface, the groundwater elevations and the date of water elevation measurements.</li> <li>2) Cross-sections depicting the stratigraphy of the entire contaminated area. If an aquitard is identified below the saturated zone, cross sections must be constructed both down dip and cross dip with respect to the aquitard and with respect to the direction of groundwater flow.</li> <li>3) Hydraulic conductivities of each potential migration flow path based upon site specific pump tests. Potential confining units must be characterized. If PNM is unable to adequately demonstrate that its previously conducted evaluations of hydraulic conductivity were technically appropriate (Completion <u>Item 3</u>, above), PNM must conduct new pump tests, and submit to EID the associated raw data and all calculations of hydraulic conductivity based on the data. Alternatively, PNM may resubmit its existing raw data and reevaluations of hydraulic conductivity using appropriate aquifer models. The appropriateness of the model used must be documented as per Completion Item 3, above.</li> <li>4) Groundwater potentiometric contour maps.</li> <li>5) Narrative description of the hydrogeologic conditions and potential contaminant pathways.</li> </ol>

item 4.

Item No.	Days to Completion	Action
5. (cont)		<p>B. The proposed assessment monitoring system.</p> <p>C. The investigatory approach that will be used to fully characterize the horizontal and vertical rate and extent of contaminant migration and each investigatory phase involved.</p> <p>D. The number, location, and depth of the wells that will initially be installed and the rationale for these decisions.</p> <p>E. The strategy to be used in subsequent investigatory phases.</p> <p>F. The chosen method of well drilling, construction and completion. A schematic and narrative description of the proposed well construction must include:</p> <ol style="list-style-type: none"> <li>1) Borehole diameter, casing diameter and casing material proposed.</li> <li>2) A well screen slot size.</li> <li>3) Filter pack material particle size range.</li> <li>4) Annular seal(s) location(s) and composition(s).</li> <li>5) Type of grout used above the saturated zone.</li> <li>6) Riser pipe protection and security (secondary casing, bumper guards, etc.).</li> <li>7) The proposed depth and length of well screens. All RCRA monitoring wells designed to monitor a specific flow zone must be screened over an equivalent length such that the same vertical section of the flow zone is monitored. Wells must be screened for no more than 5 feet above the ground water surface elevation and for no more than 15 feet below it. If a discrete flow zone is present, the screen must be positioned to monitor this zone. No more than one flow zone should be monitored per well. See Attachment A for an example of an adequate RCRA</li> </ol>

Item No.	Days to Completion	Action
5.F.7) (cont)		monitoring well specification submittal.
		8) The proposed method of well development. Well development methods which use compressed air must be avoided.
		G. The data analysis procedures that will be used to interpret the analytical data.
		H. Documentation of the appropriateness of any other investigatory techniques (e.g., soil gas studies, use of temporary driven-point wells) to be used in addition to the use of permanent, RCRA-type monitoring wells, and a discussion of how they will be utilized.
		I. A description of the parameters which will be included in data collection and the proposed schedule for sampling. This must include the provision that all wells in the assessment program will be initially sampled for Appendix IX parameters. Any hazardous constituents identified must be included as parameters in all subsequent sampling events. Within the assessment program quarterly monitoring will be conducted and quarterly reports will be submitted to EID which include chemical analytical data and water surface elevation data to EID on pc-compatible computer disk in a data format acceptable to both PNM and EID. Isothermic contour maps for each contaminant will be included in the quarterly reports. Sample analysis data must be submitted to EID within 30 days of the sampling event.
		J. The inclusion of permanent, RCRA-type monitoring wells 1) just ahead of the leading edge of the contaminant plume(s) and 2) within the plume(s) at or near the site(s) of highest contamination.
		K. A schedule of implementation which sets specific dates for the completion of each phase of the assessment program.

Item No.	Days to Completion	Action
5 (cont)		<p>L. The use of a tailored version of EID's sampling and analysis plan (Completion 1 of this schedule).</p> <p>M. A discussion of the procedures which will be used to determine the rate of constituent migration.</p>
6	90	PNM receives EID's comments on its assessment program proposal.
7	105	PNM incorporates EID's comments and resubmits its assessment program proposal to EID.
8	135	PNM implements its assessment program. Quarterly sampling of the assessment wells will continue while the assessment program is in effect.
9	155	The installation of the assessment program permanent RCRA monitoring wells is complete.
10	185	<p>PNM submits an Assessment Summary Report of results. This summary must include:</p> <p>A. The as-built, well-specific construction schematics of its permanent RCRA monitoring wells, a topographic map pursuant to the requirements of section 270.14(b)(19) and including the extent and location of all known solid waste management units with the location of each well identified using the New Mexico Coordinate System.</p> <p>B. Cross-sections constructed using data from its assessment program. Complete cross-sections must indicate stratigraphic units which differ according to:</p> <ol style="list-style-type: none"> <li>1) Particle size distribution by sieve analysis.</li> <li>2) Lab analysis of general particle roundness or angularity.</li> <li>3) Overall texture.</li> <li>4) Dry color.</li> <li>5) Zones of moisture or saturation.</li> </ol>

Item No.	Days to Completion	Action
10. (cont)		<p>C. Borehole drill logs. Drill logs must include:</p> <ol style="list-style-type: none"> <li>1) Hole number or code.</li> <li>2) Dates drilling began and finished.</li> <li>3) Driller's name and company affiliation.</li> <li>4) Drill logger's name. (All borehole cuttings must be logged by the same person to minimize subjective error.)</li> <li>5) Drill hole location.</li> <li>6) Drill rig type.</li> <li>7) Bit/auger size.</li> <li>8) For cores collected for lab analysis, sample code number and hole elevation from which the sample was taken.</li> <li>9) Items 3, 4 and 5 from Completion 9.B., above.</li> </ol> <p>D. The assessment program results characterizing the uppermost aquifer and the rate and extent of hazardous constituent migration.</p>
11	350	<p>PNM receives a report from EID describing its conclusions as to what, if any, further actions are appropriate.</p>