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SECRETARY

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DEPUTY SECRETARY

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

December 21, 1993

Mr. Ron Johnson, Senior Environmental Scientist  
Public Service Company of New Mexico  
Alvarado Square  
Albuquerque, New Mexico 87158

**RE: Receipt of Corrective Measures Proposal for the  
Corrective Action Directive (CAD) for the RCRA Unit at  
Public Service Company of New Mexico (PNM) Person  
Generating Station.**

Dear Mr. Johnson,

On November 18, 1993, the Hazardous & Radioactive Materials Bureau (HRMB) received and subsequently commented herein on the Corrective Measures Proposal for the Corrective Action Directive (CAD) for the RCRA Unit at Public Service Company of New Mexico (PNM) Person Generating Station titled: **"DRAFT REPORT: Evaluation of Available Remedial Technologies and Conceptual Design of Recommended Remedial approach for the Person Generating Station, Public Service Company of New Mexico"**, (prepared for PNM by Engineering-Science, Inc., November 1993).

*} Nov. 18  
proposal*

The CAD requires (page A-8 to A-12, Item 1. A. 1. and B. 1. through 7.,) that PNM submit a Corrective Measures Proposal (CMP) report that will select one or more of the corrective action technologies for implementation in its corrective action program, and that will detail all pertinent findings and substantiate PNM's choice of cleanup technologies. The November 18, 1993 proposal was submitted to meet these requirements. These requirements have been met with the exception of the comments below.

*↑*



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- 3 (Page 4-5, paragraph 3, Section 4.2.3 Groundwater Treatment)...**flow rates of 2 gpm... 35-40 gpm... are predicted.**  
Engineering specifications are based on predicted flow rates. More information is needed on contingency plans in the event that flow rates vary from predicted values.
- 4 (Page 4-5, paragraph 3, Section 4.2.3 Groundwater Treatment)...**The air stripper must be capable of reducing the average PCE influent concentration of approximately 100 ppb to the target MCL of less than 5 ppb.**  
Air stripper selection is based on predicted concentrations. More information is needed on contingency plans in the event that concentrations vary from predicted values.
- 5 (Page 4-7, paragraph 2, Section 4.2.4 Discharge of Treated Water), **Two options for effluent discharge are under consideration, and, in the cover letter for the CMP, PNM states, "We are also grappling with the problem of treated water disposal..."**  
In a November 30, 1993 phone conversation, between Mr. Ron Johnson and Ms. Jane Cramer, it was stated that the next draft will finalize disposal of treated groundwater. An approved Corrective Measures Proposal report must provide a plan for disposal of treated water.
- 6 (Appendix B, Figure B-4, **Concentration of PCE in groundwater after 20 years: 6 years pumping, 4 wells, R=2.0**) This figure depicts modeled results that show groundwater contamination above 5 ppb limited to an elongate area lying within the original PNM Person Generating Station property boundary. While these modeled results are encouraging, modeling must be substantiated with physical data. HRMB's concurrence with interpretations will be based on physical data not modeled data.
- 7 (Page 5-12, paragraph 2), **The purpose of this preliminary modeling effort is to begin to estimate the relative contributions of natural attenuation and pumping on contaminant removal and to evaluate the potential for significant risk due to contaminated groundwater migration.** HRMB does not agree that the purpose of the modeling is to determine the potential for significant risk.

OK

OK

no more approved disposal of PCE at PGM SC.  
1/16

OK

OK

- 8 (Page 5-12, paragraph 5, EXPOSURE ASSESSMENT) It is not the intent of this report to conduct a quantitative risk assessment in compliance with all USEPA guidance materials. Rather, the report focuses on identifying potential exposure risks that may exist at the site using only appropriate model-derived concentrations and chemical toxicity data. If a potential risk were identified at this time, it would be appropriate to consider additional, detailed investigations. This section is incomplete with regard to an assessment of exposure and risk. A baseline risk assessment should include an exposure assessment of exposure pathways and receptors which will give a daily intake concentration of all contaminants of concern for both carcinogenic and systemic toxicants. Following this a risk assessment should be calculated for all exposure pathways, both current and future, by determining total risk for carcinogens and/or total hazard index for systemic toxicants. Risk should be determined based on the residential scenario using current contaminant levels, not modeled contaminant levels. OK
- 9 (Page 5-14, paragraph 2, Section 5.4.2 Groundwater Pathway), The probability of future shallow groundwater wells in the plume area is very low, given both the predicted size and location of the VOC plume using a conservative modeling approach and the unlikelihood of the need to drill shallow wells in the area to meet either domestic or industrial water requirements...Therefore, the pathway of exposure to receptors from shallow groundwater is not currently complete and there are no risks. Although the probability of future shallow groundwater wells in the plume area may be low the proper scenario for both current and future determinations of risk is the residential scenario using current contaminant levels, not modeled contaminant levels. If clean-up levels are to be established in this document a baseline risk assessment is the proper vehicle (see comment 8). OK
- 10 (Page 5-14, paragraph 6, Section 5.5 Summary), Given this low risk of exposure to contamination at the site, consideration should be given to implementing a limited pump-and-treat remediation program at the site with the goal of reducing contaminants to the lowest concentration that is technically feasible. HRMB does not agree that exposure to contamination at the site has been determined (see item 8). HRMB also does not agree that the goal of remediation is reducing contaminants to the lowest concentration that is technically feasible. OK

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The goal of HRMB is to protect human health and the environment, which is stated in the CAD as follows: (page A-8, Item 1. A. Corrective Action Objectives) "Groundwater shall be considered to have been remediated when the concentration of all hazardous constituents in eastern property boundary and offsite wells is equal to or less than the lesser of the following..." standards.

- 11 (Page 5-14, paragraph 6, Section 5.5 Summary), **Based on model predictions, the majority of the contamination will be removed during the initial 3 to 5 years of pumping, with asymptotic levels reached after 6 to 9 years of pumping. When actual contaminant removal data indicates pumping has reached the level of diminishing returns, an additional analysis of the transport, fate and risks of remaining contaminants should be completed.**  
(see item 6).

If you should have any questions or comments, please contact Jane Cramer of my staff at 827-4308.

Sincerely,

*See Winn for  
Steve Alexander*

Steve Alexander, RCRA Technical Compliance Program  
Hazardous & Radioactive Materials Bureau

cc: Benito Garcia, NMED  
Tracy Hughes, NMED  
Barbara Hoditschek, NMED  
Jane Cramer, NMED  
File: PNM/red/93