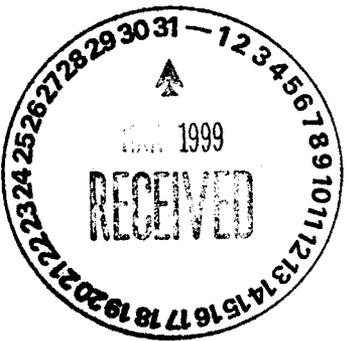


Carl

Public Service Company
of New Mexico
Alvarado Square MS 0408
Albuquerque, NM 87158



March 30, 1999

Certified Mail,
Return Receipt Requested

Mr. Benito Garcia
New Mexico Environment Department
Hazardous and Radioactive Materials Bureau
P.O. Box 26110
Santa Fe, NM 87502

Dear Mr. Garcia:

Subject: Response to Request for Supplemental Information (RSI),
Person Generating Station, NMT360010342

Public Service Company of New Mexico (PNM) is hereby submitting its preliminary response to the HRMB RSI letter dated November 25, 1998. On January 27, 1999 PNM and its contractor Parsons Engineering Science met with Mr. Carl Will, NMED-HRMB and Mr. Baird Swanson, NMED-GWB, to discuss various issues and concerns addressed by the RSI letter. Based on that meeting and subsequent conversations with Mr. Will, PNM and Parsons have prepared a detailed response to each comment provided by HRMB in the RSI letter. Each response describes how PNM intends to modify its pending permit application package to address HRMB's comments. Our response is in a matrix format in the enclosure to this letter.

It is our understanding, based on discussions with Mr. Will, that once HRMB has had an opportunity to review the response, and if HRMB is in agreement with our response and has no further request for supplemental information, PNM will then provide modified pages for insertion/incorporation into the previously submitted permit application which will become available for the public comment process.

If you have any questions, please contact me at (505) 241-2998.

Sincerely,

Ron D. Johnson
Technical Group Leader

enclosure
cc: Carl Will - NMED HRMB

**Detailed Responses to HRMB Request for Supplemental Information
RCRA Permit Renewal Application, Person Generating Station**

Comment Cited No.	Reference	Comment	Response	Pages to be Modified
1	Page I.ES-1	Delete lines 6 through 8. "Processes ... such processes; and." The Part A does not describe treatment, storage, and disposal processes or design capacity.	The requested modification will be made.	I.ES-1
2	Page I.ES-1	Lines 17, 23, 24. For clarity, delete the references to the Natural Pit Area as a regulated unit. The RCRA regulations define a "regulated unit" as a land disposal unit or treatment unit that received waste after July 26, 1982. The Permit defines the "permitted unit" as the concrete cap and the column of soil directly beneath the cap. The Permit's HSWA module lists five Solid Waste Management Units (SWMU's), all of which are regulated under the Permit. In order to avoid confusion in the use of the term "regulated unit," refer to the Natural Pit Area as a SWMU only.	The permit renewal application will be revised throughout to refer to the Natural Pit Area (NPA) as a Solid Waste Management Unit (SWMU) only. The specific lines in question will be modified in response to HRMB's request to use another term to more accurately describe the original source of environmental releases (see comment at Page I.4-2). Please refer to the response to that comment for a detailed description of the requested supplemental information.	I.ES-1, I.ES-2, I.ES-3, I.1-2, I.1-14,
3	Page I.ES-1	Lines 21 through 23. Replace "because PNM opted... not clean closed)." With "in order to implement corrective action requirements." Clean closure was not an option at this site.	PNM agrees with HRMB that clean closure was not an option at this site. However, the 1988 post-closure permit was issued for the site as a mechanism to prompt monitoring activities, since the unlined dry well was originally closed as a landfill. The extent of environmental releases was not realized until 1991, at which time NMED issued the Corrective Action Directive (CAD) to prompt additional assessment and possibly corrective action activities at the site. One of the principal objectives of this permit renewal application is to summarize—in one document—the various assessment result reports prepared by PNM and approved by NMED that identified, developed, and implemented corrective action programs for the site. Consequently, PNM proposes to modify the lines in question (and related text) slightly differently than requested by HRMB. Please refer to the responses to comments at Page I.4-2 and Page I.1-1 for examples of the proposed changes.	I.ES-1, I.1-1,
4	Page I.ES-3	Line 10. Replace "3004" with "3019 and 40 CFR S 270.10(j), as incorporated at 20 NMAC 4.1.900."	The permit renewal application will be revised as requested.	I.ES-3, I.4-1,

**Detailed Responses to HRMB Request for Supplemental Information
RCRA Permit Renewal Application, Person Generating Station**

Comment No.	Cited Reference	Comment	Response	Pages to be Modified
5	Page I.1-1	Line 3. Insert "and corrective action" between "care" and "program." Post-closure care requirements end after 30 years unless the post-closure care period is extended, but corrective action requirements under 40 CFR Part 264, Subpart F, continue until concentration limits are reached. If concentration limits are reached before the end of the post-closure care period, PNM may petition the Secretary for early termination of the Permit, pursuant to 40 CFR §264.117(a)(2)(I).	The requested clarification will be made here and at other locations in the permit renewal application with similar language. PNM understands that the corrective action program requirements are not met until the concentration limits are achieved. However, given the target concentration limits (i.e., USEPA Region 9 PRGs for shallow soil, USEPA Region 9 groundwater-protective SSLs for total soil, and the more stringent of the federal MCLs or WQCC groundwater protection standards for groundwater), PNM believes that a petition for early termination of post closure care could be technically defensible when the corrective action programs for impacted environmental media at the site are completed. At some future date, PNM could develop a petition for early termination of the post-closure permit upon completion of required corrective actions, including the 3 years of monitoring to verify attainment of target groundwater concentration limits.	I.1-1, II.1-1, II.1-2, II.1-12, II.2-5, II.2-6, II.2-7, II.2-10, III.1-1, III.1-4, III.3-1, III.5-18, III.6-1, III.6-2, III.6-8,
6	Page I.1-1	Delete lines 7 through 9. Replace with "A post-closure care permit for the Person Generating site was required to implement corrective action activities because there was a release to groundwater from the parts washrack." In order to avoid post-closure care requirements, PNM would have had to remove or decontaminate all waste and waste residues, which was not a short-term option at this site.	For the record, PNM would like to clarify certain historical events at the site. At the time of issuance of the initial post-closure permit, the primary environmental medium of concern was soils impacted by use of an unlined dry well. Upon discovery of this soil contamination (which, according to available soil quality data, extended to a depth of 70 feet below ground surface), PNM proposed to cover the contamination with a soil cap to prevent direct exposure routes and minimize infiltration. After this closure action, NMED required PNM to implement post-closure monitoring to ensure that the soil cap was adequately containing residual contamination. Consequently, the initial post-closure care permit for the site was issued before the full nature and extent of potential groundwater impacts was documented. When groundwater quality data collected during post-closure monitoring events indicated that a dissolved plume existed (and appeared to be increasing in concentration and size), NMED issued the CAD. As noted previously, this permit renewal application presents, for the first time in a stand-alone document, all elements of the corrective action program and post-closure care program that were implemented at the site. Thus, PNM proposes to modify the lines in question as follows: "A post-closure permit for the Person Generating Station site was required because additional monitoring and possibly corrective actions were necessary since PNM could not clean close all impacted areas."	I.ES-1, I.1-1, I.1-12, I.4-2, I.4-5, I.4-8, I.4-9, I.4-17, II.2-5, II.2-6,

**Detailed Responses to HRMB Request for Supplemental Information
RCRA Permit Renewal Application, Person Generating Station**

Comment No.	Cited Reference	Comment	Response	Pages to be Modified
7	Page I.1-2	Line 11. Add to the end of the sentence "and 40 CFR Part 264, Subpart F, as incorporated at 20 NMAC 4.1.500."	The requested modification will be made.	I.1-2,
8	Page I.1-2	Add to the end of the second paragraph, "The Natural Pit Area will continue to be listed as a SWMU in the Person Generating Station RCRA Permit until HRMB approves a No Further Action (NFA) determination for the site and a Class III permit modification is approved removing the site from the Permit.	The requested modification will be made.	I.1-2,
9	Page I.1-3	Lines 6 and 7. Delete "Information on waste analysis requirements has been included per 40 CFR §264.13, while." §264.13 waste analysis requirements are not required for a post-closure care permit implementing corrective action.	The requested modification will be made.	I.1-3,
10	Page I.1-3	Last line. Delete "the role of natural attenuation processes in the corrective action strategy, ..." HRMB does not approve use of natural attenuation for the shallow aquifer remediation at this time.	Based on discussions with HRMB during the 27 January 1999 meeting, PNM understands that the permit renewal application needs to be revised to present information on natural attenuation processes in a less prescriptive manner. Although natural attenuation is occurring at the site and may become a component of the final remedy, it should not be prescribed as an approved remedy. Instead, natural attenuation processes will be described in terms of designing and implementing an appropriate groundwater monitoring strategy that will (1) facilitate tracking the effectiveness of implemented, engineered corrective actions, (2) provide historical water quality data relevant to documenting plume behavior and long-term stability, and (3) support quantitative evaluations of the progress toward and eventual attainment of target groundwater concentration limits. For example, PNM recognizes that information on natural attenuation processes may be useful in supporting any future re-assessments of target cleanup objectives for the site (e.g., as part of an evaluation of technical infeasibility or alternative abatement standards). However, PNM will not imply that natural attenuation should be used to formulate alternate groundwater concentration limits that exceed target groundwater concentration limits.	I.1-3, I.1-4, I.4-15, I.4-18, II.1-2, II.1-12, II.2-5, II.2-6, IV.1-1, IV.2-5, IV.3-3 through IV.3-17, IV.3-23 through IV.3-35

**Detailed Responses to HRMB Request for Supplemental Information
RCRA Permit Renewal Application, Person Generating Station**

Comment No.	Cited Reference	Comment	Response	Pages to be Modified
			<p>Natural attenuation will not be strongly identified in the permit renewal application as a proposed element of the corrective action strategy. Rather, the permit renewal application will be revised to include references to natural attenuation processes in terms of how they are contributing to the achievement of target groundwater concentration limits. For example, the text in question is proposed to be modified to read:</p> <p>“Volume 4 presents the CAP for shallow groundwater, including detailed information on the engineered groundwater extraction and treatment system, and an updated corrective action monitoring program to be used to assess progress toward and eventual attainment of target groundwater concentration limits (per 40 CFR §264.100). PNM intends to pursue compliance with promulgated groundwater standards as the target groundwater concentration limits; this permit renewal application does not propose any form of alternate groundwater concentration limits. The monitoring program to be implemented for shallow groundwater has been designed to collect data relevant to tracking the effectiveness of implemented corrective actions, documenting progress toward attainment of these promulgated groundwater standards, and overall plume behavior, including the contribution of natural attenuation processes.”</p> <p>This proposed modification will significantly impact the permit renewal application, particularly Volume 4 (see adjacent column and related comments below). Note, however, that the substantive scope and objectives of the current corrective action program for shallow groundwater will not change.</p>	
11	Page I.1-4	Lines 3 and 4. Delete “using a phased remediation strategy ... natural attenuation.”	See response to comment at Page I.1-3. The example text modification eliminates the lines noted in this comment.	I.1-3, I.1-4, I.4-15, I.4-18, II.1-2, II.1-12, II.2-5, II.2-6, IV.1-1, IV.2-5
12	Page I.1-15	Lines 17 and 18. Delete “This time ... at or near target levels.”	<p>PNM understands that this sentence states a conclusion not yet approved by NMED. Consequently, PNM proposes to modify the text to read:</p> <p>“Results for the confirmation sampling event conducted after this second removal activity have been forwarded to NMED for review as part of</p>	I.1-15,

**Detailed Responses to HRMB Request for Supplemental Information
RCRA Permit Renewal Application, Person Generating Station**

Comment No.	Cited Reference	Comment	Response	Pages to be Modified
13	Page I.4-2	<p>Lines 9 through 12. Delete "The Person Generating Station ... and painting of equipment at the station." Although the Permit currently defines the permitted unit to be the contaminated soil, RCRA does not provide for permitting of hazardous waste contamination, and this part of the Permit should be revised. The buried, open-ended pipe in which hazardous wastes were disposed of can best be defined as an unlined surface impoundment, and as such did not meet RCRA requirements and also could not have been permitted. The Post-Closure Care Permit implements corrective action requirements for the release at the site.</p>	<p>PNM's request for a NFA determination for the Natural Pit Area."</p> <p>PNM will modify the lines in question to ensure that the text does not imply that residual hazardous waste contamination is or has been permitted. The text will be modified to read:</p> <p>"The regulated unit at the Person Generating Station site consists of the concrete cap and the column of contaminated soil directly beneath the cap that was impacted by past releases from the former unlined dry well operated at this location."</p> <p>Additionally, as noted in the detailed response to the comment below, the permit renewal application will be revised throughout to refer to the open-ended pipe as the "former unlined dry well," the definition agreed upon in our 27 Jan 1999 meeting. Finally, as noted in responses to comments at Pages I.ES-1 and I.1-1, the 1988 post-closure permit focused on establishing monitoring requirements. Corrective activities were initiated at the site in response to the CAD issued by NMED in 1991. Similar discussions throughout the permit renewal application will be modified, as described in previous examples, for clarity.</p>	<p>I.ES-1, I.ES-2, I.ES-3, , I.1-1, I.1-2, I.1-3, I.1-4, I.1-7, I.1-9, I.1-10, I.1-11, I.1-12, I.1-13, I.1-15, I.2-1, I.2-2, I.2-3, I.2-4, I.2-7, I.3-1, I.3-2, I.3-3, I.3-4, I.3-6, I.3-7, I.4-2, I.4-4, I.4-5, I.4-8, I.4-9, I.4-11, I.4-12, I.4-13, I.4-14, I.4-16, I.4-17, I.4-18, I.4-19, I.4-24, I.4-25, II.1-2, II.1-5, II.1-12, II.2-2, II.2-3, II.2-4, II.2-5, III.1-1, III.1-2, III.1-3, III.1-4, III.2-1, III.2-4, III.2-5, III.2-6, III.3-1, III.3-7, III.3-17, III.5-1, III.5-14, III.6-1, III.6-4, IV.1-1, IV.1-2, IV.1-8, IV.2-5, IV.3-17, IV.3-34, IV.3-35, IV.3-50</p>
14	Page I.4-2	<p>Substitute for the term "vessel," "disposal pit" or some other term more accurately describing the open-ended pipe. A vessel is defined as a hollow receptacle capable of holding a liquid. The Permit Application, incorporated by reference into the Permit, is part of the public record for this site, and it is necessary that it accurately describe the site and the site history. Make this change throughout the Permit Application.</p>	<p>The permit renewal application will be revised throughout to refer to the open-ended pipe as the "former unlined dry well," as requested. Please note that this requested modification impacted a significant number of pages in the initial permit renewal application. PNM has attempted to track these required page modifications (see adjacent column) to facilitate HRMB's review of the requested supplemental information. The initial description of the open-ended pipe appears at Page I.ES-1. The following specific text modification will be incorporated at this first location, in response to this comment and the comment on Page I.ES-1 (see above). The text at Page I.ES-1 has been modified to read:</p> <p>"This post-closure permit renewal application addresses the regulated unit, which is defined as the concrete cap and the column of soil directly beneath the cap that had been impacted by the former unlined dry well previously operated at the site, and the Solid Waste Management Unit (SWMU) called the Natural Pit Area (NPA)."</p>	<p>I.ES-1, I.ES-2, I.ES-3, I.1-2, I.1-3, I.1-4, I.1-7, I.1-9, I.1-10, I.1-11, I.1-12, I.1-13, I.1-15, I.2-1, I.2-2, I.2-3, I.2-4, I.2-7, I.3-1, I.3-2, I.3-3, I.3-4, I.3-6, I.3-7, I.4-2, I.4-4, I.4-9, I.4-11, I.4-12, I.4-13, I.4-14, I.4-16, I.4-18, I.4-19, I.4-24, I.4-25, II.1-2, II.1-5, II.1-12, II.2-2, II.2-3, II.2-4, II.2-5, III.1-1, III.1-2, III.1-3, III.1-4, III.2-1, III.2-4, III.2-5, III.2-6, III.3-1, III.3-7, III.3-17, III.5-1, III.5-14, III.6-1, III.6-4, IV.1-1, IV.1-2, IV.1-</p>

**Detailed Responses to HRMB Request for Supplemental Information
RCRA Permit Renewal Application, Person Generating Station**

Comment No.	Cited Reference	Comment	Response	Pages to be Modified
			<p>Additionally, the first full description of the "open-ended pipe" that appears in the permit renewal application (page I.1-9) will be modified as follows:</p> <p>"The parts wash area included a sump and a 3.5-foot by 10-foot cylindrical open-bottomed metal pipe (dry well) that was installed below-grade in a vertical position. This open-bottomed metal pipe, located on the north side of the site, was used as a repository for wastes generated during equipment cleaning. The buried metal pipe, which can best be described as an unlined dry well, was used from 1976 through 1983."</p>	8, IV.2-5, IV.3-17, IV.3-34, IV.3-35, IV.3-50
15	Page I.4-15	Lines 7 through 8 state that there is no reasonable future scenario under which human receptors could contact contaminated groundwater. Lines 20 through 21 state that contaminants are projected to reach the nearest downgradient production well in approximately 45 years. Explain the discrepancy between these statements or delete the first statement.	The statement in lines 7 and 8 will be deleted because it is too broad. Instead, line 20 and 21 will be modified to read: "This indicates that in the absence of corrective action pumping, it would take approximately 45 years for groundwater currently under the Person Generating Station Site to migrate to the nearest downgradient production well."	I.4-15
16	Attachment 27	Provide a clearer map of drinking water production wells within 0.25 mile of the facility boundary.	A better map will be provided.	Attachment 27
17	Part A, Part V	Include a facility contact address.	The contact address was inadvertently not completed. This information will be provided (i.e., same as mailing address provided in Volume 2).	Appendix A.
18	Page II.1-2	Lines 3 through 10. Delete this paragraph. Cleanup levels must be met at the whole site. According to 40 CFR §264.95, the point of compliance is the downgradient boundary of the waste management area, not the facility boundary. At the Person Station site, the point of compliance should be PSMW-1R, not PSMW-6R, 8B, 8A, and 11 as is currently stated in the Permit. The reissued Permit will be revised to reflect this.	The requested modification will be made. The change in the point-of-compliance well will impact several pages of the permit renewal application, particularly those detailing the goals of the corrective action programs for groundwater and the nature and scope of the compliance/corrective action monitoring activities. PNM will structure the corrective action program for shallow groundwater to achieve target groundwater concentration limits at all monitored locations downgradient from the waste management area (i.e., the former unlined dry well). As described in the response to the comment at Page II.2-8,	II.1-2, II.2-4, II.2-5, II.2-7, II.2-8, IV.1-1, IV.1-9, IV.3-2, IV.3-36 through IV.3-39

**Detailed Responses to HRMB Request for Supplemental Information
RCRA Permit Renewal Application, Person Generating Station**

Comment No.	Cited Reference	Comment	Response	Pages to be Modified
		Under §264.100(e)(1) and (2), concentration limits must be met between the compliance point and the property boundary and beyond the facility boundary. Corrective action may be terminated pursuant to 40 CFR §264.96(c) and §264.100(f) if the concentration limits are not exceeded for a period of three years.	PNM proposes to conduct 3 additional years of semi-annual groundwater monitoring once the target groundwater concentration limit has been achieved to verify that no statistically significant increases (i.e., exceedances) in constituent concentrations occurs.	
19	Page II.2-5	Line 6. Delete "within the RCRA facility." Under 40 CFR §264.100(e)(2), concentration limits must be met off-site.	<p>PNM agrees with the intent of this requested modification, since the site point-of-compliance is now identified as PSMW-1R. The lines in question will be revised to read:</p> <p>"2. Concentrations of PCE, 1,1-DCE, or 1,1,1-TCA are equal to or below the target groundwater concentration limits (specified in Table 2.1) for three consecutive years at the point-of-compliance well (PSMW-1R) and at all monitored wells downgradient from the compliance point."</p>	II.2-4, II.2-5, IV.1-1, IV.1-9,
20	Page II.2-5	Lines 17 and 18. Delete ", or until the 30-year post closure monitoring requirement is completed." The 30 year post-closure care period does not limit the duration of corrective action monitoring after there has been a release. Corrective action monitoring may be discontinued after concentration limits are not exceeded for three years.	<p>PNM agrees with the intent of this requested modification. PNM is proposing to continue corrective action monitoring at the site until target groundwater concentration limits have been achieved (as demonstrated by sufficient sampling data for soils and by 3 consecutive years of groundwater monitoring data), or until there are sufficient data available to support a proposal for technical infeasibility, alternative abatement standards, or other alternate cleanup objective, if necessary. To clarify the intent of the compliance/corrective action monitoring plans proposed in the permit renewal application, PNM proposes the following text modification:</p> <p>"However, PNM proposes to continue corrective action monitoring at the site at least until such time as the aforementioned criteria are achieved. The corrective action monitoring plans for the shallow flow zone and the deeper portions of the aquifer are presented in Volumes 4 and 5, respectively, of this permit renewal application. The corrective action monitoring plans included in this permit renewal application (1) are based on the requirements for a compliance monitoring program under 40 CFR §264.99, (2) are effective in determining compliance with the target groundwater concentration limits, and (3) are adequate to</p>	II.2-5, II.2-7, III.1-4, III.6-8, IV.1-10,

**Detailed Responses to HRMB Request for Supplemental Information
RCRA Permit Renewal Application, Person Generating Station**

Comment No.	Cited Reference	Comment	Response	Pages to be Modified
			determine the success of implemented corrective actions per 40 CFR §264.100(d)."	
21	Page II.2-7	Lines 8 through 12. Delete "In the event ... 30-year post closure monitoring period is reached." Corrective Action Program (CAP) requirements cannot be fulfilled if concentration limits have not been met. See comments for II.2-5 above.	See response to comment at Page II.2-5 above.	II.2-5, II.2-7, III.6-8
22	Page II.2-8	Line 25. Replace "8" with "12." Demonstration of attainment of concentration limits for three years is required by 40 CFR §264.96(c) and §264.100(f).	<p>As discussed at the 27 January 1999 meeting with HRMB, PNM is proposing to conduct 3 years of semi-annual sampling to demonstrate attainment of target groundwater concentration limits. These semi-annual sampling events would be in lieu of quarterly sampling events implied as necessary in this comment. PNM believes that semi-annual sampling would be technically adequate under RCRA as there does not appear to be a significant seasonal impact on contaminant concentrations at this site. Therefore, PNM proposes to modify the specified text to read as follows:</p> <p>"Once concentrations of all contaminants have fallen below their respective target groundwater concentration limits in all monitoring program wells, PNM will continue semi-annual monitoring of all compliance wells for at least three consecutive years to demonstrate attainment of the concentration limit."</p>	II.2-8, II.2-10, II.4-2, IV.1-10, IV.3-2, IV.3-9
23	Page II.2-10	Line 3. 40 CFR §264.96(c) and §264.100(f) require that PNM demonstrate attainment of concentration limits for three years. Trend analysis may be of value for determining that contaminant levels will not increase above concentration limits after that time period, but cannot be used to replace the §264.96(c) and §264.100(f) requirement.	PNM agrees with this comment, and did not mean to imply in the permit renewal application that trend analysis would be used in lieu of 3 years of sampling results. Rather, PNM is proposing to conduct trend analysis to estimate whether contaminant concentrations are expected to significantly change <u>after</u> the final 3-year monitoring period. Such an analysis also may be necessary to support a proposal for technical infeasibility, alternative abatement standards, or some other alternate concentration limit, in the event that corrective actions do not progress as currently expected. See comment 24 for suggested change.	II.2-8, IV.3-9,
24	Page II.2-10	Line 5. Replace "groundwater units have" with "groundwater has."	The line in question is proposed to be significantly revised in keeping with previously-identified comment responses. PNM proposes to revise the first complete paragraph on Page II.2-10 to read:	II.2-10

**Detailed Responses to HRMB Request for Supplemental Information
RCRA Permit Renewal Application, Person Generating Station**

Comment No.	Cited Reference	Comment	Response	Pages to be Modified
			<p>“When 3 years of semi-annual monitoring data indicate that contaminant concentrations have remained at or below target groundwater concentration limits, PNM will petition NMED to approve a determination that corrective actions for groundwater are no longer necessary. As described earlier, PNM also is prepared to petition NMED for early termination of the post-closure care period, pursuant to 40 CFR §264.117(a)(2)(i).”</p>	
25	Page II.2-10	<p>Lines 5 through 8. Delete “Following receipt ... properly abandoned.” Groundwater monitoring is required to comply with corrective action requirements under 40 CFR §264.100(d) and post-closure care requirements under §264.117(a)(1)(i). NMED cannot commit in this permit to ending post-closure care monitoring requirements based on a specific condition identified now. The decision to end post-closure care requirements will be based on all factors that determine that monitoring is not necessary to protect human health and the environment pursuant to §264.117(a)(2)(I). NMED will make that decision at the time it is requested based on all relevant factors.</p>	<p>See response to comment at Page II.2-10 above. Additionally, PNM intended only to include such text in the permit renewal application to identify its long-term objective of petitioning for early termination of the permit, once corrective action program requirements and other relevant program requirements have been satisfied. PNM proposes to modify the text of the permit renewal application in several locations to clarify this intent (Note: PNM has attempted to list the impacted pages in the next column). For example, please refer to the proposed revision prompted by comment at Page III.6-2 below.</p>	<p>II.2-10, III.1-1, III.1-4, III.3-1, III.5-18, III.6-8, III.6-9,</p>
26	Page II.2-10	<p>Lines 9 through end. Delete. Concentration limits must be met within the facility boundary before corrective action can be considered to be completed.</p>	<p>As discussed at the 27 January 1999 meeting with HRMB, PNM is proposing to implement voluntary groundwater use restrictions at the site until such time as the corrective action program can be terminated, as approved by NMED. The discussion provided in the permit renewal application erroneously implies that these voluntary restrictions would be put in place only after corrective actions were completed. As HRMB had no objections to this intention, PNM proposes to modify this text (and related discussions in Volume 4) as follows:</p> <p>“To further minimize the potential for adverse health or environmental impacts during corrective actions, PNM also proposes to voluntarily implement two specific groundwater use restrictions. These proposed restrictions are as follows:</p>	<p>II.2-10, IV.3-33, IV.3-34,</p>

**Detailed Responses to HRMB Request for Supplemental Information
RCRA Permit Renewal Application, Person Generating Station**

Comment No.	Cited Reference	Comment	Response	Pages to be Modified
			<ol style="list-style-type: none"> 1. The first restriction will prevent the siting of any new production wells that are screened within the upper 100 feet of the saturated zone within 1,000 feet of the RCRA facility property boundary. This restriction will remain in effect until concentrations of all COPCs at all compliance program monitoring wells have been reduced to levels that would not pose a significant risk to industrial receptors if extracted groundwater is used for industrial purposes. 2. The second restriction will prevent the siting of any new production well within 200 feet of the shallow groundwater plume regardless of the depth of the screened interval. This restriction is in accordance with New Mexico Drinking Water Supply Regulation, Title 20, Chapter 7, Part 1, Subpart 109.C.2. This restriction will remain in effect until the mean concentration of all compliance monitoring wells has been reduced to target groundwater concentration limits (Table 2.1)." 	
27	Page II.4-2	Lines 7 and 13. Change "8" to "12."	See response to comments at Page II.2-8 above. The estimated costs will be adjusted to include only 6 semi-annual monitoring events, rather than 8 quarterly monitoring events.	II.4-2
28	Page III.5-18	Lines 11 through 13. Delete the second to last sentence, "40 Code of Federal Regulations ... by decontamination." 40 CFR §270.1(c)(5) and (6) apply to interim status facilities and describes procedures for avoiding post-closure requirements by removing or decontaminating hazardous constituents from a unit at closure. The criteria to apply at the Person Station site are those for termination of corrective action, not closure of a unit.	<p>PNM agrees with this clarification, and will revise the text in Volume 3 of the permit renewal application to specify that the criteria for terminating corrective action for soils will be used to determine whether the soil vapor extraction (SVE) system can be decommissioned. For example, the introduction to Section 3.1 of Volume 3 will be revised to read: "A significant objective of the SVE system was to remove contaminant mass so that concentrations in the soil were reduced to final health- and environmentally-protective levels. Once these cleanup objectives are achieved, PNM can petition NMED to terminate corrective action requirements, and possibly the RCRA post-closure care responsibilities, associated with the concrete closure cap and underlying soil."</p> <p>The text in question (at page III.5-18) will be revised to read:</p> <p>"If soil concentrations are less than USEPA's conservative SSLs (for total soils) and risk-based PRGs (for shallow soils), the soils may no</p>	III.1-1, III.1-4, III.3-1, III.5-18, III.6-1, III.6-5, III.6-8, III.6-9

**Detailed Responses to HRMB Request for Supplemental Information
RCRA Permit Renewal Application, Person Generating Station**

Comment No.	Cited Reference	Comment	Response	Pages to be Modified
			<p>longer require any form of corrective action, and PNM, in fact, may be able to petition NMED for early termination of all permit requirements related to maintenance and monitoring of the concrete cap. Further discussion regarding residual soil contamination as compared to established health- and environmentally-protective soil levels is provided in Section 6 of this volume of the permit renewal application.”</p> <p>Additionally, PNM wishes to include clarifying information on this point at Section 6.5.2, Termination of Corrective Actions/Post-Closure Care Requirements. The text will be revised here to read:</p> <p>“Following receipt of NMED notification, PNM will no longer be required to continue corrective actions for soils at the site. Depending on relevant data and needs, PNM may request NMED to approve early termination of all permit conditions associated with the final closure cap and the underlying soils, pursuant to 40 CFR §264.117(a)(2)(i). Early termination of these elements of the permit may be warranted and technically justifiable even if groundwater corrective action plans are still in progress at the site. As noted by NMED, the “regulated unit” consists of the closure cap and the column of soil directly beneath the cap. Hazardous waste contamination of groundwater cannot be permitted, as such; rather, the RCRA permit will prescribe the corrective actions required to address releases. If the soil underlying the former unlined dry well is remediated to levels that are both protective of human receptors and underlying groundwater, continuing post-closure care responsibilities at the closure cap may not be necessary. Such actions should not have an impact on the scope, nature, and duration of groundwater corrective actions.”</p>	
29	Page III.6-2	Lines 2 and 5. Clarify what is meant by “self-implementing” and “proceed ... by letter notification only.” For example, specify that if certain conditions are met as outlined in this Permit, a permit modification will not be required for drilling through the cap.	<p>PNM intended to include sufficient information in the permit renewal application to minimize any near-future need for additional permit modifications. To clarify the use of the term “self implementing”, PNM proposes to modify the text in question to read:</p> <p>“This section of the permit renewal application is intended to both describe activities to be completed to document soil remediation, as well as serve as the formal request for permit modification to conduct said activities at the RCRA cap and underlying soils. This and previous</p>	III.6-2, III.6-8,

**Detailed Responses to HRMB Request for Supplemental Information
RCRA Permit Renewal Application, Person Generating Station**

Comment No.	Cited Reference	Comment	Response	Pages to be Modified
			<p>sections of this volume of the permit renewal application are intended to demonstrate that disturbance of the final cover to conduct the proposed sampling will not increase the potential hazard to human health or the environment, per 40 CFR §264.117(c). That is, by gaining NMED's approval of this section of the permit renewal application, PNM plans to proceed with final soil and soil gas sampling through the closure cap. If sampling data confirm attainment of the proposed remediation standards, PNM plans to petition NMED to approve a request to formally halt corrective action addressing the soils underlying the closure cap, because it is no longer warranted to protect human health and the environment (as described by USEPA corrective action guidance, 55 FR 145, p. 30813 and p. 30830). Results of soil and soil gas sampling and data analysis will be included in this petition for NMED's review and approval. PNM also may, at the time of requesting NMED to approve completion of soil corrective actions, petition NMED for early termination of all permit conditions applicable to the RCRA cap and underlying soils, pursuant to 40 CFR §264.117(a)(2)(i)."</p> <p>Similar modifications also will be necessary when addressing contingency plans for the concrete closure cover (Section 6.4).</p>	
30	Page III.6-2	<p>Lines 13, 14, and 16. HRMB believes that maximum detected contaminant levels or upper 95 percent tolerance limits (UTLs), using appropriate statistical guidance, should be compared against clean up levels to determine if soils have been remediated. If PNM wishes to use mean or median levels, submit justification, such as EPA guidance, supporting that decision.</p>	<p>PNM agrees that maximum or 95 percent upper tolerance limits (UTLs) on the arithmetic mean of site soil data should be used to conservatively represent the potential exposure concentration for shallow soils. This approach would be consistent with USEPA guidance on how to best estimate site concentrations to protect against long-term (acute) exposures, using limited site data sets. However, the USEPA's Soil Screening Guidance (May, 1996) recommends using the average (mean) of site soil data when comparing site soil data to groundwater-protective SSLs. To clarify this issue, the following text revision will be added to the end of the first paragraph on page III.3-6:</p> <p>"PNM proposes to use these conservative soil cleanup criteria to define the average soil concentration that can remain in the source area soils and protect underlying groundwater. PNM proposes to collect soil and soil gas samples to establish the average remaining soil contaminant concentrations beneath the former unlined dry well which can be compared to Region 9 groundwater-protective SSLs which are based on</p>	III.3-6, III.6-2,

**Detailed Responses to HRMB Request for Supplemental Information
RCRA Permit Renewal Application, Person Generating Station**

Comment No.	Cited Reference	Comment	Response	Pages to be Modified
			<p>a dilution attenuation factor (DAF) of 20. Use of average soil concentrations for this purpose is consistent with USEPA guidance (USEPA, 1996a, 1996b). First, USEPA recommends use of average soil concentrations with the generic groundwater-protective SSLs due to the conservatism present in the partition equation (USEPA, 1996a). Use of the arithmetic average concentration also is consistent with the objective to reduce long-term (chronic) exposures (USEPA, 1992a, 1992b). Second, PNM is proposing to conduct sufficient confirmatory sampling to develop a statistically-valid site average concentration. "</p> <p>Based on recent discussions with HRMB, PNM intends to revise Section 6.3 to describe how a combination of soil and soil gas sampling will be used to verify compliance with Region 9 SSLs. The text in Section 6.3 will be revised to describe the following verification/sampling program:</p> <ul style="list-style-type: none"> - At least two soil borings will be completed within 10 feet of the SVE extraction well and extend to a depth of approximately 120 feet. Soil samples will be collected at depths of 3, 6, 9, 12, 33, 57, 77, 97, and 117 feet in each boring using the En-Core® sampling method. Samples from 3, 6, 9, and 12 feet will be used to establish the 95 percent UTL for the shallow soils. - At least five soil vapor probes will be installed in each boring within the following depth intervals (120-115, 100-95, 80-75, 60-55, and 40-35 feet). Each vapor point will be completed with a five-foot sand filter pack and a bentonite-sand mixture will be used to seal off the annular space between sampling intervals. - Following a 30-day equilibration period (SVE system turned off), soil gas samples will be collected from the SVE extraction well and each of the newly installed discrete soil vapor probes. Soil gas samples will be analyzed for 1,1-DCE, PCE, 1,1,1-TCA, 1,3,5-Trimethylbenzene, and 1,2,4-Trimethylbenzene. (Note: PNM is recommending that PSMW-1, PSMW-2, PSMW-3, SG-1, and SG-2 not be sampled because PSMW-1 has been plugged and abandoned and all are located outside of the original contaminated soil volume area. The contaminated soil volume area was well characterized by a tight sampling grid during the original assessment studies 	

**Detailed Responses to HRMB Request for Supplemental Information
RCRA Permit Renewal Application, Person Generating Station**

Comment No.	Cited Reference	Comment	Response	Pages to be Modified
			<p>conducted in 1983-1984. See Volume III, Section 2.)</p> <ul style="list-style-type: none"> - Using a standard equilibrium equation, soil gas concentrations will be converted to soil residual concentrations. These average soil concentrations will be compared to the soil matrix sample collected from each interval and the larger value used to determine the overall average concentration within the soil column. This average concentration will then be compared to the Region 9 SSLs which provide for a DAF of 20. <p>PNM expects the groundwater-protective SSLs to define whether corrective action requirements have been completed at the site. Based on SVES extraction equilibrium values, PNM believes SSLs have been achieved.</p>	
31	Page III.6-2, Line 12 Page III.6-3, Table 6-1 Page III.6-3, Line 21	Provide additional explanation of the derivation of the proposed soil remediation standards justifying the commercial/industrial 25 year level. HRMB uses Region 9 1998 Preliminary Remedial Goals (PRGs) for direct exposure to soil, which are 0.12 mg/kg for 1,1-dichloroethene (DCE), 16.0 mg/kg for tetrachlorethene (PCE), and 1,400.0 mg/kg for 1,1,1-trichloroethane (TCA) for industrial soil. According to the Region 9 PRG tables, the PNM PRG for TCA is over 43 times the soil saturation concentration, and the PNM PRG for DCE and PCE are significantly higher than the Region 9 PRG. HRMB recommends that PNM use the Region 9 Soil Screening Levels (SSLs) for migration to groundwater for soil clean up levels. These levels are conservative for the Person Station site, but assure the most certain protection of human health and the environment, and if the soil remediation has achieved the levels presented in Table 5.5, at page III.5-17 of the Permit Application, then the Region 9 SSLs will be met.	<p>PNM will modify the permit renewal application to identify the U.S. Environmental Protection Agency (USEPA) Region 9 PRGs for industrial soils as the final target cleanup goals for shallow soils. This requested modification impacts several sections of Volume 3. For example, Section 3.3.1 of the permit renewal application will be revised significantly to present the USEPA Region 9 PRGs as the cleanup goals for shallow soils. PNM proposes to insert the following text to replace the paragraphs beginning at the end of page III.3-3 until the beginning of section 3.3.2.</p> <p>“PNM proposes to use the standard PRGs for direct exposure to industrial soil that have been developed by USEPA Region 9 (USEPA, 1998) as the target health-protective final cleanup goals for the site. As with groundwater (see Volume 4 of this permit renewal application), PNM is not pursuing any form of alternate concentration limits for any environmental medium at the Person Generating Station site. Although the PRGs developed in the 1994 focused risk assessment are likely to be sufficient to be protective of future receptors (given the nature of future exposure potential at the site), PNM proposes to use the 1998 USEPA Region 9 PRGs to determine when corrective action requirements, and eventually post-closure care responsibilities, have been met for site industrial soils.</p>	III.3-3, III.3-4, III.3-5, III.6-2, III.6-3

**Detailed Responses to HRMB Request for Supplemental Information
RCRA Permit Renewal Application, Person Generating Station**

Comment No.	Cited Reference	Comment	Response	Pages to be Modified
			<p>The USEPA Region 9 PRGs correspond to a 1E-6 cancer risk for carcinogens and a noncarcinogenic hazard quotient of 1. Exposure pathways included in the soil PRG calculations include incidental ingestion, inhalation of both volatiles and particulates, and dermal absorption. Note that the USEPA Region 9 PRG for PCE is based on new toxicity information (which was not available during the 1994 focused risk assessment). Table 3.1 presents the USEPA Region 9 PRGs for each of the three COPCs at the Person Generating Station site.”</p> <p>As indicated, Table 3.1 (and Table 6.1) will be revised. Minor editorial revisions will be necessary to the conclusion of Section 3.3.1 and 6.2 (not listed here) to incorporate the changes in the proposed shallow soil remediation goals.</p> <p>The groundwater-protective soil screening levels (SSLs) presented in the permit renewal application are identical to those specified by USEPA Region 9 for a dilution attenuation factor (DAF) of 20. The DAF of 20 is extremely conservative for the small source area at Person Station. Consequently, no change in the proposed cleanup goals is warranted. However, a few text modifications will be made to reference USEPA Region 9 (in addition to the nationwide USEPA SSL guidance).</p>	
32	Page III.6-7	Section 6.3.5. See comment above for page III.6-2 regarding use of mean and median soil cleanup values.	<p>Please see detailed response to comment at Page III.6-2 above. PNM proposes to revise the text at Section 6.3.5 to read:</p> <p>“Upon receipt of laboratory data, PNM will complete a data validation and general quality assurance check to insure that data have reliably met the specified detection limits. Once validated, the maximum or 95% UTL for data collected in shallow soils and the average concentration value using all data points will be calculated. The maximum or 95% UTL on the arithmetic mean for shallow soil data will be compared to the industrial soil PRGs set forth by USEPA Region 9 (1998). The average from all soil intervals (including shallow soils) will be compared against the Region 9 groundwater-protective SSLs. If the appropriate site data values are equal to or less than the proposed cleanup criteria, the soil underlying the closure cover will be considered remediated.”</p>	III.3-6, III.6-2, III.6-7

**Detailed Responses to HRMB Request for Supplemental Information
RCRA Permit Renewal Application, Person Generating Station**

Comment No.	Cited Reference	Comment	Response	Pages to be Modified
33	Page III.6-7	Line 21. Explain the derivation of proposed industrial risk-based standards. See comment above for page III.6-3.	Please see detailed response to comment at Page III.6-2 above (comment no. 31).	III.3-3, III.3-4, III.3-5, III.6-2, III.6-3
34	Page III.6-9	See comment above regarding Table 6.1.	Please see detailed response to comment at Page III.6-2 above (comment no. 31).	III.3-3, III.3-4, III.3-5, III.6-2, III.6-3
35	Page III.6-10	Delete the last sentence. HRMB does not approve natural attenuation for the shallow aquifer.	PNM cannot locate the reference to natural attenuation in this section of the permit renewal application. As described in responses to comments on Volume 4 (primarily), PNM intends to track the progress of natural attenuation processes to (1) monitor the effectiveness of the engineered corrective actions, (2) evaluate progress toward target groundwater concentration limits, and (3) establish site-specific information relevant to documenting long-term plume behavior (i.e., natural attenuation processes leading to stability).	
36	Page IV.1-1	Lines 3 and 4. Delete “, the role of natural attenuation processes in the corrective action strategy.”	The requested modification will be made. Note that, as described in response to comment at Page I.1-3 (comment no. 10) above, all references to natural attenuation as a prescribed component of the corrective action program for shallow groundwater will be eliminated. Instead, natural attenuation processes will be presented in terms of their possible contribution to the long-term effectiveness (success) of the engineered groundwater pump-and-treat system at attaining target groundwater concentration limits.	I.1-3, I.1-4, I.4-15, I.4-18, II.1-2, II.1-12, II.2-5, II.2-6, IV.1-1, IV.2-5, IV.3-3 through IV.3-17, IV.3-23 through IV.3-35
37	Page IV.1-1	Lines 8 through 10. Delete “a phased remediation strategy involving both” and “and natural attenuation.”	The requested modification will be made.	I.1-3, I.1-4, I.4-15, I.4-18, II.1-2, II.1-12, II.2-5, II.2-6, IV.1-1, IV.2-5, IV.3-3 through IV.3-17
38	Page IV.1-8	Line 9. Include information identifying well locations and depths of detections below the uppermost 20 feet of the aquifer.	Concur. The depths of “B” wells with contaminant detections will be provided in this section. The contaminant detections are listed on Table 1.1 and their locations will be referenced to Figure 1.1.	IV.1-8,
39	Page IV.1-9 and 10	Lines 21 and 22. Replace “between the compliance point and the downgradient facility property boundary” with “beyond the point of	The requested modification will be made. Please also see response to comments at Page II.1-2 and II.2-5 (comment nos. 18 and 19).	II.1-2, II.2-4, II.2-5, II.2-7, II.2-8, IV.1-1, IV.1-9, IV.3-2,

**Detailed Responses to HRMB Request for Supplemental Information
RCRA Permit Renewal Application, Person Generating Station**

Comment No.	Cited Reference	Comment	Response	Pages to be Modified
		compliance.” Under 40 CFR §264.100(e)(2) and §264.92, corrective action must achieve concentration limits beyond the facility boundary.		
40	Page IV.1-9 and 10	Line 22 and 23. Replace “, as specified in the CAD, are PSMW-6R, PSMW-11, and PSMW-8A” with “is PSMW-1R.” See comment for Volume 2, Section 1, page II.1-2.	<p>The requested modification will be made (see above response). The text in question will be revised to read:</p> <p>“The point of compliance well at the Person Generating Station site is PSMW-1R. As can be seen on Figure 1.1, this well is located along the easternmost boundary of the RCRA waste management area. Consequently, this well defines the vertical surface located at the hydraulically downgradient limit of the waste management area that extends down into the uppermost aquifer, per 40 CFR §264.95(a). Corrective actions for shallow groundwater will be required until groundwater samples collected from specified monitoring wells to the east of (i.e., downgradient from) and including the point of compliance well are equal to or below the specified target groundwater concentration limits for a period of 3 consecutive years. Therefore, the corrective action plan (CAP) for shallow groundwater will be implemented until PNM can demonstrate that groundwater beyond the compliance point has been successfully remediated below target groundwater concentration limits.”</p>	II.1-2, II.2-4, II.2-5, II.2-7, II.2-8, IV.1-1, IV.1-9, IV.3-2, IV.3-36 through IV.3-38
41	Page IV.1-9 and 10	Line 24. Replace “these wells are” with “this well is.”	The requested modification will be made. Please see response to comment above (no. 40).	II.1-2, II.2-4, II.2-5, II.2-7, II.2-8, IV.1-1, IV.1-9, IV.3-2, IV.3-36 through IV.3-38
42	Page IV.1-9 and 10	Line 25. Replace “facility” with “waste management area.”	The requested modification will be made. Please see response to comment above (no. 40).	II.1-2, II.2-4, II.2-5, II.2-7, II.2-8, IV.1-1, IV.1-9, IV.3-2,
43	Page IV.1-9 and 10	Last line. Replace “these points” with “this point.”	The requested modification will be made. Please see response to comment above (no. 40).	II.1-2, II.2-4, II.2-5, II.2-7, II.2-8, IV.1-1, IV.1-9, IV.3-2, IV.3-36 through IV.3-38
44	Page IV.1-9	Last line. Replace “compliance points” with	The requested modification will be made. Please see response to	II.1-2, II.2-4, II.2-5, II.2-7,

**Detailed Responses to HRMB Request for Supplemental Information
RCRA Permit Renewal Application, Person Generating Station**

Comment No.	Cited Reference	Comment	Response	Pages to be Modified
	and 10	"compliance point."	comment above (no. 40).	II.2-8, IV.1-1, IV.1-9, IV.3-2, IV.3-36 through IV.3-38
45	Page IV.2-1	Lines 16 through 18. Provide additional information about well locations and depths of detections below the uppermost 20 feet of the aquifer.	See response to comment 38. PNM proposes to modify the permit application at this point to read: "Figure 1.1 and Table 1.1 summarize the location and available COPC analytical results for all monitoring wells initially screened deeper than the first 20 feet below the water table (in addition to wells screened at the water table). These wells have been designated as 'B' wells, to indicate they are screened across intervals deeper than the top 20 feet of the aquifer (i.e., the most contaminated zone)."	IV.2-1
46	Page IV.3-2	Line 17. Delete "in the area downgradient and outside of the permitted RCRA facility." Insert after "have been achieved" "beyond the compliance point for a period of three years."	The requested modification will be made. Please also see detailed response to comments at Pages II.1-2 and IV.1-9 (comment nos. 18 and 40, respectively).	IV.3-2, IV.3-39
47	Page IV.3-3 through 17	Section 3.3. Delete the entire section except for paragraphs 3.3.1 and 3.3.2.2. HRMB does not approve asymptotic contaminant concentration levels as concentration limits at this time. If asymptotic levels are reached in the future and PNM believes that it is technically infeasible to reduce those levels by engineered remediation means, then PNM should submit a proposal of technical infeasibility at that time. WQCC groundwater protection regulations at 20 NMAC 6.2.4103.E can be used as a model for what will be accepted by NMED for making a showing of technical infeasibility.	As discussed in the detailed response to comment at Page I.1-3, PNM proposes to revise the permit renewal application to incorporate references to natural attenuation processes only in terms of understanding the long-term effectiveness (success) of the engineered groundwater remediation approach. Natural attenuation will <u>not</u> be prescribed as a component of the corrective action program. Consequently, PNM proposes to significantly revise this section of the permit renewal application to clarify this intent. A full reading of the proposed revisions cannot be presented here. However, the following highlights several proposed inserts that serve as examples of the intent and scope of the revision. The title to Section 3.3 will be corrected to "Shallow Groundwater Performance Standards" and the introduction to Section 3.3 will be revised to read: "This section describes the groundwater performance standards which will be used to determine when groundwater has been remediated and, therefore, when corrective actions taken for the shallow groundwater can	I.1-3, I.1-4, I.4-15, I.4-18, II.1-2, II.1-12, II.2-5, II.2-6, IV.1-1, IV.2-5, IV.3-3 through IV.3-17, IV.3-23 through IV.3-35

**Detailed Responses to HRMB Request for Supplemental Information
RCRA Permit Renewal Application, Person Generating Station**

Comment No.	Cited Reference	Comment	Response	Pages to be Modified
			<p>be terminated. Because modeling done as part of the CMP (ES, 1994) indicates that diminishing rates of contaminant mass reduction over time are expected, this section also discusses the possibility that full restoration of the groundwater may prove technically impracticable. This information is included in the permit renewal application to aid in evaluating the expected performance of the selected engineered remedy for shallow groundwater over time. PNM is <u>not</u> proposing any form of alternate concentration limits for shallow groundwater as part of this permit renewal application. However, PNM will assess progress toward the concentration limits set forth in this application as part of our ongoing corrective action monitoring program. In the event that PNM feels that a proposal for technical infeasibility, alternative abatement standards, or similar assessment is warranted and defensible, PNM will submit a Class III permit modification request, with all required supporting data, to NMED.”</p> <p>A new Appendix to Volume IV will be added and Section 3.3.2, which will be titled “Expected Progress Toward Target Groundwater Concentration Limits,” will be revised to read:</p> <p>“This section describes how the engineered groundwater extraction and treatment system is expected to perform over time. Predictive estimates of diminishing rates of mass removal over time are provided, as an aid to future evaluations of system effectiveness and progress toward target groundwater concentration limits. ... If diminishing rates of contaminant mass recovery are indicated by the corrective action monitoring program, PNM will consider a proposal for technical infeasibility , or alternative abatement standards pursuant to WQCC groundwater protection regulations at 20 New Mexico Administrative Code (NMAC) 6.2.4103.E. and F. Section 3.6 and Appendix D of this volume of the permit renewal application summarizes the various site-specific conditions that could either promote or hinder the effectiveness (success) of the engineered corrective action approach at achieving target groundwater concentration limits at all points downgradient from and including the point of compliance well. PNM has designed the corrective action monitoring program to track mass removal processes (and possibly distinguish the effects of natural attenuation from engineered processes) to support an ongoing evaluation and</p>	

**Detailed Responses to HRMB Request for Supplemental Information
RCRA Permit Renewal Application, Person Generating Station**

Comment No.	Cited Reference	Comment	Response	Pages to be Modified
			<p>optimization of shallow groundwater corrective actions. Information collected during the regular monitoring events will allow PNM to increase the short- and long-term efficiency and performance of the groundwater pump-and-treat system. This information also will provide valuable data that may be useful to demonstrate stable attainment of target groundwater concentration limits.”</p> <p>Note that Figures 3.1 and 3.2 would be revised to emphasize the objective of monitoring/optimizing system performance.</p> <p>Section 3.3.2.1, which will be titled “Monitoring the Effectiveness of Pump and Treat Mass Removal,” will be revised to read:</p> <p>“Following each semi-annual corrective action monitoring event, PNM proposes to evaluate the PCE data from the last 6 to 8 monitoring events to determine if plume concentrations are approaching “asymptotic conditions” (i.e., defined at this point as less than a 10 percent reduction in the mean concentration in one year). Once this leveling off begins, PNM may petition NMED to approve quarterly monitoring of all plume wells to provide the quantity of data required by the WQCC regulations (20 NMAC 6.2.4103.E) to statistically demonstrate that the zero slope has been attained and to establish the (diminishing) effectiveness of the engineered corrective action approach.</p> <p>Finally, PNM concurs with the recommendation to delete Section 3.3.3 in whole from the permit renewal application. As stated previously, PNM is not proposing any form of alternate concentration limits as part of this permit renewal application.</p>	
48	Page IV.3-3 through 17	In paragraphs 3.3.2.2, page IV.3-9, delete in the first sentence of the paragraph, “Regardless of whether natural attenuation or continued pumping is the mechanism for achieving final groundwater cleanup criteria.”	See detailed response to comment no. 47 above.	I.1-3, I.1-4, I.4-15, I.4-18, II.1-2, II.1-12, II.2-5, II.2-6, IV.1-1, IV.2-5, IV.3-3 through IV.3-17, IV.3-23 through IV.3-35,
49	Page IV.3-23 through 34	Section 3.5. Delete. HRMB does not approve natural attenuation as a treatment method for the	As discussed in responses to related comments (see above), PNM understands that natural attenuation processes should not be strongly	I.1-3, I.1-4, I.4-15, I.4-18, II.1-2, II.1-12, II.2-5, II.2-

**Detailed Responses to HRMB Request for Supplemental Information
RCRA Permit Renewal Application, Person Generating Station**

Comment No.	Cited Reference	Comment	Response	Pages to be Modified
		shallow groundwater at this time. If the engineered remedy now in place proves ineffective in the future at reducing contaminant levels, PNM should submit a proposal of technical infeasibility at that time.	identified in the permit renewal application as a component of the groundwater corrective action program for this site. Consequently, all of Section 3.5, with significant revisions, will be placed in a new appendix to this volume. The appendix is proposed to be titled, "Impacts of Natural Attenuation Processes on the Expected Performance of Shallow Groundwater Corrective Actions." As suggested by this title, the section will be revised to emphasize how various site conditions, given the nature of the contamination and the characteristics of the shallow groundwater, could enhance and/or hinder the ultimate success of the engineered remedy. The new Section 5 would consist of the description of voluntary groundwater use restrictions to be put in place at the site during corrective actions (i.e., the "old" Section 3.5.3, modified as described in response to comment at Page II.2-10 [comment no. 26]).	6, IV.1-1, IV.2-5, IV.3-3 through IV.3-17, IV.3-23 through IV.3-35,
50	Page IV.3-35	Section 3.6.3.1. Lines 17 through 25. "As contaminant concentrations ... sampling frequency scenario." Delete. HRMB does not approve asymptotic levels as concentration limits or natural attenuation as a treatment method at this time for the shallow aquifer.	As described previously, PNM is not proposing any form of alternate concentration limits as part of this permit renewal application. In keeping with the revisions to this volume of the application, PNM proposes to revise the text in question to read: "Should the system indicate diminishing rates of mass recovery, despite optimization efforts, PNM may request NMED to approve quarterly sampling. A more detailed discussion of this approach to monitoring the performance of the corrective action is presented in Section 3.3.2 of this volume."	IV.3-35
51	Page IV.3-36	Lines 15 to 16. Replace "wells at Person Generating Station ... PSMW-11." With "well at Person Generating Station is PSMW-1R." Delete rest of paragraph. Revise Figure 3-3.	The requested modification will be made. Both Figure 3.3, as well as Table 3.2 ("old" Table 3.5) will be revised accordingly.	IV.3-36 through IV.3-38
52	Page IV.4-1	Line 8. Replace "50" with "5."	The text in question has been revised to delete the reference to 50 ppb entirely and incorporate revisions related to tracking the effectiveness (success) of the engineered groundwater pump-and-treat system. Therefore, PNM proposes to modify the Section 4.1 text to read: "An annual evaluation of the pumping and treatment system will be incorporated into the annual RCRA groundwater monitoring report.	IV.4-1

**Detailed Responses to HRMB Request for Supplemental Information
RCRA Permit Renewal Application, Person Generating Station**

Comment Cited No.	Reference	Comment	Response	Pages to be Modified
			<p>This report will provide NMED with a description of the remediation progress of the previous year and recommendations for improving the remediation process. In the event that the ongoing monitoring program indicates the engineered pump-and-treat system is achieving diminishing contaminant mass recovery rates, PNM retains the option to (1) install additional or replace existing extraction wells to improve the effectiveness of the current corrective action program, (2) consider supplemental engineered approaches to reach target groundwater concentration limits, or (3) re-evaluate the long-term objectives of the corrective action program for shallow groundwater via a proposal for technical infeasibility, alternative abatement standards, or similar vehicle. The first option could be implemented by PNM without prior approval from NMED; only letter notification of such actions would be necessary (i.e., a Class I permit modification), either before or after implementation. However, implementation of option two or three would require a Class III permit modification. Consequently, no details on these two options are provided in this permit renewal application.”</p>	
53	Page IV.4-1	<p>Lines 11 through 13. Replace “The addition or extension of extraction wells ... during the annual reevaluation” with “If additional extraction wells or changes to existing extraction wells are required, HRMB will initiate a permit modification in accordance with 40 CFR §270.41, as incorporated at 20 NMAC 4.1.190, and 20 NMAC 4.1.901, or PNM will submit a permit modification request to HRMB in accordance with 40 CFR §270.42, as incorporated at 20 NMAC 4.1.900, and 20 NMAC 4.1.901.”</p>	<p>See Comment 52. Based on our discussions with HRMB, the addition or extension of extraction wells will be addressed through a Class I permit modification without prior NMED approval.</p> <p>Section 3.8 (Amendments to Corrective Action Plan) would be modified to read :</p> <p>“A Class I permit modification without prior NMED notification will be required for improvements to the groundwater extraction or treatment system that enhance or increase the productivity of the engineered corrective action, such as replacement, addition, or relocation of an extraction well or a key component of the treatment system. Similarly, replacement or addition of a monitoring well to improve the corrective action monitoring system will only require a Class I permit modification without prior NMED approval. All such improvements also will be clearly identified in an annual progress report provided to NMED.”</p> <p>This language will allow future system improvements to be completed as Class I permit modifications.</p>	IV.2-9, IV.3-53

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Comment No.	Cited Reference	Comment	Response	Pages to be Modified
54	Page IV.4-1	Lines 14 through 18. Delete the last paragraph.	The requested modification will be made.	IV.4-1
55	Page IV.5-4	Lines 5 through 7. Delete "As described ... average extraction rate."	<p>PNM proposes to modify this text to read:</p> <p>"As described in Section 3.3.2, groundwater pumping operations will continue until either (1) target groundwater concentration limits are achieved for 3 consecutive years, or (2) PNM believes that a proposal for technical infeasibility, alternative abatement standard, or similar evaluation may be warranted, possibly due to diminishing contaminant mass recovery rates and/or other data suggesting that full restoration of groundwater may be technically impracticable. The original modeling estimate to reach diminishing mass recovery rates was 6 to 7 years, assuming a 57 gpm average extraction rate. ... Theoretically, the groundwater extraction system may have to operate for more than 7 years if higher pumping rates cannot be achieved."</p>	IV.5-4
56	Page IV.5-4	Lines 18 through 21. Delete "Assuming that ... final cleanup criteria."	The requested modification will be made.	IV.5-4
57	Page IV.6-1	Line 16. Replace "8" with "12."	See response to comment at Page II.2-8 above (comment no. 22). The estimated costs will be adjusted to include only 6 semi-annual monitoring events, rather than 8 quarterly monitoring events	IV.6-1
58	Page V.3-4	Line 16. Replace "8" with "12."	See response to comment at Page II.2-8 above (comment no. 22).	V.3-4
59	Page V.5-1	Line 9. Replace "8" with "12."	See response to comment at Page IV.6-1 above (comment no. 57).	V.5-1