

**New Mexico Environment Department (NMED) response to Public Service Company of New Mexico (PNM) Comments
on Post-Closure Care Permit (PCCP) for Persons Generating Station
September 2012**

Comment No.	Page No.	Section No.	Comment/Summary of Comment	NMED Response	Modification to Permit
1.	35-36	3.3.5	PNM requests that in addition to a description of current groundwater quality conditions, a statement that the graduated shutdown process is ready to commence be included in the Permit.	Current conditions indicate that contaminant levels in groundwater in all monitoring wells have been remediated to concentrations below New Mexico Water Quality Control Commission (NMWQCC) standards, tap water screening levels, and U. S. Environmental Protection Agency Maximum Contaminant Levels (MCLs) for at least 3 years, as applicable, and meet the clean up goals specified in Permit Section 4.3.1. Text indicating that the clean-up goals have been achieved and the graduated shutdown process can commence has been added to Permit Section 3.3.5.	The 2 nd paragraph of Permit Section 3.3.5 has been revised to read, in part: "The Permittee shall ensure that when the hazardous constituents in groundwater at all wells in Table 3-2 do not exceed their concentration limits in Tables 3-4 and 3-5 for a minimum of three consecutive years, a graduated shutdown process of the GWTS commences. As of December 2011, this condition has been met, suggesting that the graduated shutdown of the GWTS may commence on the date this Permit becomes effective."
2.	20-21	2.2.1.1	PNM requests that the permit conditions be revised to allow for storage of the following documents at PNM headquarter offices at 414 Silver SW due to limited storage space at the	NMED agrees with the proposal that the records be kept at the PNM headquarter offices. Routine monitoring reports generated during	Item #6 of Permit Section 2.2.1.1 has been moved to become item #6 at Permit Section 2.2.1.2. Item #12 of Permit Part 2.2.1.1 has been moved to become item #7 of Permit Section 2.2.1.2.

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			<p>Facility: Well Construction, maintenance and replacement records; All monitoring reports and records required by the Permit including: a) records of all monitoring data used to complete the Permit Application; b) all data gathered or generated during the closure or post-closure period; and, c) all laboratory reports, drilling logs, bench-scale or pilot scale data.</p>	<p>the post closure period are to be maintained at the Facility.</p> <p>The Unlined Well is subject to post-closure care under 40 CFR §§ 264.116-120, not closure under 40 CFR § 264.110, except 40 CFR § 264.110(b)(1). Thus, NMED has also revised Section 2.2.1.1 (12)(b) to remove reference to closure.</p>	<p>A new item #11 has been added to Permit Section 2.2.1.1 stating:</p> <p>“(11) Routine monitoring reports.”</p> <p>Section 2.2.1.1 (12)(b) has been revised to read:</p> <p>“all data gathered or generated during the post-closure period; and,”. This revision is now found in Permit Section 2.2.1.2, item #7b.</p> <p>Permit Section 2.2.1.2 has been revised in part to read:</p> <ul style="list-style-type: none"> (6) well construction, maintenance and replacement records; (7) all monitoring reports and records required by this Permit, including but not limited to: <ul style="list-style-type: none"> a. records of all monitoring data used to complete Permit Application(s); b. all data gathered or generated during the post-closure period; and, c. all laboratory reports, drilling logs, bench-scale or pilot scale data.
3.	28-29	2.6.5	<p>PNM requests that the business address of the emergency coordinators listed in Table 2-3 be corrected.</p>	<p>NMED has corrected the business address of the emergency coordinators.</p>	<p>Table 2-3 has been revised to correct the business address of the emergency coordinators.</p> <p>Table 2-3 has been revised to show:</p> <p>Primary: John Hale Alvarado Square-2104 Albuquerque, NM 87158</p> <p>1st Alternate: Rick Threet</p>

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					Alvarado Square-ER 16 Albuquerque, NM 87158
4.	32	3.2	<p>PNM requested clarification on the process to terminate corrective action if groundwater standards are met before the end of the post-closure period.</p>	<p>The NMED agrees that the Permit needs clarification regarding this matter, and thus, extensive revisions have been made to, in particular, what are now Permit Sections 3.1-3.5.</p> <p>Post-closure care and corrective action are not the same things; ending corrective action does not automatically end post-closure care. Furthermore, compliance monitoring must be conducted for the purpose of post-closure care even if corrective action for the groundwater has been completed.</p> <p>The Permittee must submit a Class 3 permit modification request in accordance with 40 CFR § 270.42(c) to petition for termination of corrective action.</p>	<p>Portions of the Permit are included here to address by example the main issues of the Facility’s comment and the NMED response.</p> <p>Concerning the end of corrective action, the second paragraph of Permit Section 3.2 has been revised to read:</p> <p>“If corrective action is completed as specified at Permit Section 3.3.5 during the Post-Closure Care period, the Permittee may petition the Department by means of a Class 3 permit modification request under 40 CFR § 270.42(c) to terminate corrective action. Upon completion of corrective action, the Permittee may petition the Department to terminate Post-Closure Care earlier than the required 30 year period in accordance with 40 CFR § 264.117(a)(2)(i); however, the Department is not obligated to approve termination of Post-Closure Care if the Department finds it necessary to continue Post-Closure Care to protect human health or the environment. If corrective action is incomplete at the end of the Post-Closure Care period, Post-Closure Care will be extended by the Department in accordance with 40 CFR §§ 264.117(a)(2)(ii) and 264.96(c).”</p> <p>NMED added Permit Section 3.5 to set forth more clearly the requirements for compliance monitoring during post-closure care. The requirements mirror those for the monitoring of groundwater during the graduated shut down period for the GWTS (once the graduated shut down period begins). As part of differentiating between groundwater monitoring being conducted for corrective action versus post-closure care, the requirements for groundwater sampling procedures and</p>

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				<p>Once corrective action has been completed, the Permittee may petition to end post-closure care early pursuant to 40 CFR § 264.117(a)(2)(i). However, the Department is not obligated to end post-closure care early even if corrective action activities are completed for groundwater.</p> <p>NMED also noted upon review of this comment that the routine reporting requirements were inconsistent in the draft permit. NMED has corrected this situation in the final Permit. All such reports are now Semi-Annual Reports.</p> <p>NMED also noted upon review of this comment that the assessment of groundwater included the use of prediction intervals. A more robust method of statistical</p>	<p>assessment were re-organized into Permit Section 3.4.</p> <p>The NMED also revised all routine reports to be Semi-Annual Reports, and change the Permit throughout. Changes to Permit Section 2.3.10 were necessary to include revisions to the groundwater assessment procedures.</p> <p>Concerning use of the Student-T test, NMED revised the first paragraph of Permit Section 3.4.5, which now states: “The Permittee shall determine whether there is a statistically significant increase in concentrations for any constituent listed in Tables 3-4 and 3-5 (<i>see</i> 40 CFR § 264.99(d)). The Permittee shall statistically evaluate ground-water monitoring data using the Student T-test and confidence intervals, and shall comply with the performance standards outlined in 40 CFR § 264.97(i)(1-6), as appropriate. Data values below the level of detection shall be set equal to their corresponding detection limits for the purpose of conducting groundwater assessment under this Permit.”</p> <p>Additional text in Permit Section 3.4.5 explains further the application of the Student-T test.</p>

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				analysis is more appropriate for the Facility as the wells at the Facility have been in place for a long time and abundant data are available. Thus, NMED changed in part the statistical procedures in the Permit, changing from using prediction intervals to employing the Student T-test.	
5.	32-33	3.3	PNM requests clarification as to whether the constituent of concern (COC) concentrations listed in Tables 3-4 and 3-5 or the Section 4.3.1 concentrations are the groundwater cleanup levels.	<p>The NMED agrees that the Permit needs clarification regarding concentration limits listed in Tables 3.4 and 3.5. As such, extensive revisions have been made to in particular what are now Permit Sections 3.1, 3.3, and 3.4.</p> <p>For the sake of simplicity, groundwater is to be cleaned up to the concentration limits specified in Tables 3.4 and 3.5.</p> <p>Permit Section 4.3.1 sets forth the requirements to</p>	<p>Permit Section 3.3 states, in part:</p> <p>“The concentration limits listed in Tables 3-4 and 3-5 meet both the corrective requirements of Permit Section 4.3.1 and 40 CFR § 264.100(a), and the requirements for compliance monitoring under 40 CFR § 264.99.”</p> <p>Permit Section 4.3.1 contains the clean up requirements for groundwater.</p> <p>Portions of the Permit are included here to address by example the main issues of the Facility’s comment and the NMED response.</p> <p>For the clean up criteria for groundwater, the first paragraph of Permit Section 3.3.5 has been revised to read:</p> <p>“The Permittee shall operate the GWTS until the hazardous constituents in groundwater at all wells listed in Table 3-2 are</p>

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				<p>establish clean up levels for groundwater. Remediation of the groundwater at the Facility must satisfy the requirements of Permit Section 4.3.1 no matter whether the contamination originated from the Unlined Well or some other solid waste management unit or area of concern at the Facility.</p> <p>The concentration limits listed in Tables 3-4 and 3-5 apply to groundwater monitoring for both corrective action and post-closure care and are derived from the requirements at 40 CFR § 264.94. For the specific constituents listed in Tables 3-4 and 3-5, all of the concentration limits are set in accordance with 40 CFR § 264.94(a)(3) as <i>alternate limits</i>. These alternate limits are set at the more stringent level of the applicable NMWQCC standard or</p>	<p>in compliance with the concentration limits specified in Tables 3-4 and 3-5 for a period of three consecutive years and the Permittee has demonstrated as described below that there is no potential for any hazardous constituent concentration to rebound to a level exceeding its respective concentration limit.”</p> <p>For determination of acceptable performance of the GWTS, the 8th paragraph of Permit Section 3.3.1 was revised to read:</p> <p>“The Permittee shall include in each Semi-Annual Report a demonstration of the effectiveness of the GWTS. Acceptable performance shall be demonstrated by meeting all of the following performance standards:</p> <ol style="list-style-type: none"> 1. A demonstration that the GWTS continues to remove contaminants from the groundwater through an assessment of mass removal using influent and effluent data from the GWTS. 2. Samples of treated effluent exiting the GWTS meet the concentration limits specified in Tables 3-4 and 3-5. 3. Using groundwater monitoring data from the wells listed in Table 3-2 and for the hazardous constituents listed in Tables 3-4 and 3-5, a demonstration that contaminant trends are decreasing or that contaminant concentrations have stabilized to levels that do not exceed the concentration limits in Tables 3-4 and 3-5.”

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				<p>MCL, or in cases where a NMWQCC standard or MCL does not exist, the applicable tap water screening level. Thus, the alternate limits coincidentally are set at levels that would also satisfy the groundwater cleanup levels in Section 4.3.1.</p> <p>Because more than one contaminant affecting human health is present in groundwater at the Facility, the toxic pollutant criteria at 20.6.2.7.WW NMAC for the combination of contaminants, or the Human Health Standard of Subsection A of Section 20.6.2.3103 NMAC for each contaminant apply, whichever is more stringent. NMED believes that the concentration limits listed in Tables 3-4 and 3-5 are set at levels that would meet 20.6.2.7.WW</p>	

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				<p>NMAC for the combination of contaminants in these tables.</p> <p>NMED also noted upon review of this comment that the criteria for determination of acceptable performance of the GWTS was poorly developed in the draft permit. NMED has corrected this situation in the final Permit.</p>	
6.	33-34	3.3.1	<p>PNM requests that the Permit be revised to state that three extraction wells EW-5, PSMW-25 and PSMW-26 are out of service and will be plugged and abandoned.</p>	<p>NMED agrees to make the revisions.</p>	<p>Permit Section 3.3.1 has been revised to delete the three extraction wells from the system. Permit Attachment A, Table A-2 lists the three wells as approved for plug and abandonment.</p> <p>Permit Section 3.6 states, in part, “Monitor wells PSMW-25 and PSMW-26 and extraction well EW-5 are no longer functional. Within 90 days of the effective date of this Permit, the Permittee shall submit to the Department for approval a work plan to abandon PSMW-25, PSMW-26, and EW-5.”</p> <p>The first sentence of the second paragraph of Section 3.3.1 has been revised to read:</p> <p>“The Permittee shall extract and treat contaminated groundwater from recovery wells VEW, EW-1, EW-2, EW-3,</p>

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					and EW-4.”
7.	33-34	3.3.1	<p>Since the ground water delivered to the groundwater treatment system (GWTS) is non-hazardous as defined by standards, PNM requests flexibility in options to respond to potential spills of ground water from the GWTS onto soils.</p>	<p>While the water may contain concentrations of contaminants at levels below NMWQCC standards or MCLs prior to treatment, <i>any amount</i> of a constituent from a listed waste that is contained in the water necessitates managing the water as a hazardous waste. Thus, spills from the GWTS, extraction wells, and associated piping (in other words, the “dirty side” of the GWTS system) must be documented in the Operating Record and must be reported in the next Semi-Annual Report as required in the Permit. Large spills could trigger additional corrective action.</p> <p>Through the authority of the Permit, groundwater successfully treated</p>	<p>For the sake of clarity, NMED has revised the last paragraph of Permit Section 3.3.1 to read:</p> <p>“The Permittee shall operate the GWTS so that no contaminated groundwater is allowed to contact soils surrounding the system, extraction wells, and associated piping leading from the extraction wells to the GWTS. If any groundwater contacts soils in such a manner, the Permittee shall record the event in the Facility Operating Record and shall include a reference to the event in the next Semi-Annual Report.”</p>

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				through the GWTS no longer contains listed hazardous waste or hazardous waste constituents.	
8.	33-34	3.3.1	PNM requests revision of Permit to allow inspection of GWTS monthly rather than daily.	NMED has made the requested revision as the GWTS is equipped with automatic shutdown functions and with an alarm sent to the Reeves Generating Station control room.	The sixth paragraph of Permit Section 3.3.1 has been revised to read: “The Permittee shall ensure qualified personnel monitor the GWTS monthly to measure operating parameters of the system and to sample water influent and effluent entering and leaving the GAC canisters. Monthly flow readings shall be taken from influent, the influent surge tank, and the effluent surge tank. Pressure readings shall be taken monthly. All GWTS monitoring data shall be recorded in the Operating Record and shall be included in the next Semi-Annual Report.”
9.	35	3.3.4	PNM requests clarification as to which standards are to be used to determine cleanup levels. COC Limits in Table 3-4 and 3-5 or those in NMAC.	See NMED response to comment 5.	See NMED response to comment 5.
10.	35-36	3.3.5	PNM Requests clarification as to whether a Class 3 Permit Mod will be required to terminate corrective action and post- closure care.	The Permit has been revised to indicate more clearly that the Permittee must petition the NMED to end post-closure care. See NMED response to comment 4 concerning termination of corrective action.	Permit Section 3.2 states, in part: “The Permittee shall conduct Post-Closure Care for a period of 30 years, unless the period for Post-Closure Care is reduced in accordance with 40 CFR § 264.117(a)(2)(i).” Additionally, “Upon completion of corrective action, the Permittee may petition the Department to terminate Post-Closure Care earlier than the required 30 year period in accordance with 40 CFR § 264.117(a)(2)(i); however, the Department is not obligated to approve termination of Post-

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					Closure Care if the Department finds it necessary to continue Post-Closure Care to protect human health or the environment.”
11.	36-38	3.3.6	Due to access/easement issues PNM requests that PSMW-2, PSMW-3 or PSMW-3B be used as the upgradient plume compliance monitor well rather than PSMW-37.	In a meeting on August 8, 2012, a representative of the Permittee indicated a preference to continue use of upgradient monitor well PSMW-07R. The Permit has been revised to grant this request.	PSMW-07R is listed as the background well in Table 3-2 and 3-3.
12.	38-39	3.3.7.1	PNM requests that a reduced Appendix IX analysis list not including pesticides, herbicides or pharmaceutical constituents be required.	Historical information indicates that pesticides, herbicides, and pharmaceutical constituents are unlikely to have been released at the Facility. Thus, there is no need to analyze for these parameters. Pursuant to 20.4.1.500 NMAC incorporating 40 CFR § 264.98(g)(2), NMED may allow sampling for a site - specific subset of the Appendix IX list.	Permit Section 3.4.3 has been revised to state, in part: “The Permittee shall also collect and analyze groundwater samples annually from the wells identified on Table 3-2 for all metal, volatile organic constituents, and semivolatile organic constituents identified in 40 CFR Part 264 Appendix IX which are not pesticides, herbicides, or pharmaceuticals, to determine whether additional hazardous constituents are present (<i>see</i> 40 CFR §§ 264.100(d) and 264.99(g)).”
13.	39-42	3.3.7.2	PNM requests that the temperature stability criteria be revised or eliminated.	The temperature stability requirement has been revised to allow a variance of ± 2.0 °C. This should allow sufficient and reasonable variability	Permit Section 3.4.4 has been revised to read, in part: “Groundwater stability shall be considered acceptable when measurements are ± 0.1 pH units for pH, ± 2.0 °C for temperature, and ± 20 micromhos (μ mhos) for specific conductance.”

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				for meeting well purging requirements.	
14.	39-42	3.3.7.2	PNM requests clarification on the disposal of purge water.	NMED has clarified that purge water may be disposed of in the GWTS such that is treated to remove the contained hazardous waste, or by other means in compliance with the Resource Conservation and Recovery Act and the New Mexico Hazardous Waste Management Regulations at 20.4.1 NMAC. For example, instead of treating the water through the GWTS, the Permittee may transport the purge water to an offsite permitted hazardous waste facility for treatment and disposal. See also NMED response to Comment #7.	Permit Section 3.4.4 has been revised to read, in part: “All monitoring well purge water shall be stored in containers until discharged into the influent of the Groundwater Treatment System (GWTS), or treated and disposed of by other means in compliance with the New Mexico Hazardous Waste Management Regulations.”
15.	39-42	3.3.7.2	PNM asked why TCE, nickel and chromium are included as COCs on Table 3-6.	Included in error, they have been removed from Table 3-6.	Table 3-6 has been revised to remove references to TCE, nickel, and chromium. Table 3-6 is now in Permit Section 3.4.4. NMED has also added SVOCs to the table to account for enhanced sampling.

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16.	43	3.5.3	PNM requests that wells be checked for sediment build-up only when a pump is removed for maintenance or repair.	Historical information indicates that sediment build-up in Facility monitoring wells is not a significant problem. Thus, the wells will not need to be checked annually for sediment build-up.	Permit Section 3.7.3, in part, has been revised to read: "All monitor and extraction wells shall be checked for any build-up of sediment whenever the pump in the well is removed for maintenance or repair."
17.	8-10	A.5.3	PNM requests that the Permit state that the current DP-1006 requirements no longer require monitoring of the two irrigation lagoons.	The current discharge permit does not require monitoring of the lagoons.	The last paragraph of Permit Attachment Section A.5.3 has been revised to remove the description concerning sampling the two irrigation lagoons. The relevant text has been changed to read: "Monthly sample collection includes influent and effluent from the two carbon units."
18.	8-10	A.5.3	Table A-2 should be revised to indicate that PSMW-25 and PSMW-26 are extraction wells.	NMED has revised Table A-2 to indicate that PSMW-25 and PSMW-26 are extraction wells, and have the same status description as EW-5.	Permit Attachment A, Table A-2 has been revised to indicate that PSMW-25 and PSMW-26 are extraction wells, and have the same status as EW-5.
19.	12	B.5	PNM requests that NMED revise section B.5 to be consistent with Section 3.6 approving removal of the RCRA cap.	NMED has indicated in Section B.5 that the requirements of B.5 will no longer apply if the Permittee removes the cap in accordance with Section 3.6.	Permit Attachment Section B.5 has been revised to read: "The requirements of this Section (B.5) concerning inspection, maintenance, and repair of the RCRA cap do not apply if the Permittee removes the RCRA cap in accordance with Permit Section 3.8."