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May 7, 2009

VIA FEDEX

Mr. James Bearzi
Chief, Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6313

RE: PERSON GENERATING STATION, NMT 360010342, HWB-PNM-07-002 - RESPONSE TO NOTICE OF DEFICIENCY

Dear Mr. Bearzi:

Enclosed please find Public Service Company of New Mexico's (PNM) response to the February 10, 2009, Notice of Deficiency (NOD) to the June 2007 Person Generating Station RCRA Part B Post-Closure Care Permit Application (NMT360010342).

This response includes the following items:

(1) Responses to each NOD comment, following the organization of NMED's NOD. Each NOD comment is provided verbatim, with PNM's response following each comment.
(2) A table that cross-references each NOD comment, PNM's comment response, and location(s) within the document that address the comment.
(3) A table summarizing the revised sections or pages of the Permit Application that are provided as hardcopies.
(4) Two hardcopies of the revised sections or pages of the Permit Application, with edited information (added or deleted) clearly indicated with redline/strikeout font.
(5) Two CDs that contain all of the electronic files of the Permit Application.

PNM is in agreement with the sampling requirements set forth by NMED in the NOD as Table 2 and as repeated below.

If you have any questions, please contact me at (505) 241-2014.

Sincerely,

John Hale

John Hale, P.E.
Technical Project Manager

Enclosure

Person Generating Station Key Well Network

Well ID	Semiannual Sampling Prior to GWTS Shutdown	Semiannual Sampling During GWTS Shutdown	Reason for Selection as Key Well
PSMW-01R[a,b]	X	X	Point of compliance well
PSMW-07R[c]	X	X	Background well
PSMW-08A[a,b]	X	X	Plume center well
PSMW-10[a,b]	X	X	Plume center well
PSMW-11	X[d]	X	Requested by NMED
PSMW-13A[a,b]	X	X	Plume center well
PSMW-17		X	Southern plume boundary well
PSMW-18		X	Northern plume boundary well
PSMW-20	X[d]	X	Requested by NMED
PSMW-22		X	Plume center well
PSMW-27		X	Downgradient plume boundary well
PSMW-37	X[d]	X	Requested by NMED
VEW (Extraction well)	X	X	Extraction well
EW-1 (Extraction well)	X	X	Extraction well
EW-2 (Extraction well)	X	X	Extraction well
EW-3 (Extraction well)	X	X	Extraction well
EW-4 (Extraction well)	X	X	Extraction well
PSMW-24C-500	X[d]	X	Requested by NMED
PSMW-27C-500	X[d]	X	Requested by NMED
PSMW-27C-600	X[d]	X	Requested by NMED

[a]As of the date of this permit application, this well has not met three years of compliance.

[b]Will be sampled annually for Appendix IX constituents.

[c]Monitoring well PSMW-07R is a background well that will be sampled annually for Appendix IX constituents.

[d]Annual sampling.

GWTS = Groundwater treatment system.

ID = Identification.

NOTICE OF DEFICIENCY RCRA PART B POST-CLOSURE CARE PERMIT APPLICATION PERSON GENERATING STATION, JUNE 2007 PNM RESOURCES, EPA ID# NMT360010342 MWB-PNM-07-002

A. REGULATORY REQUIREMENTS (SECTION 1.3.2)

1. The discussion in this Section of the Permit Application and related Table 1 must contain more detail concerning the applicable regulations that mandate groundwater monitoring for a unit undergoing corrective action.

The Unlined Well meets the definition of a surface impoundment (as defined in 20.4.1.100 NMAC incorporating 40 CFR §260.10). Because it received wastes after July 26, 1982, the Unlined Well (hereinafter referred to as the "Regulated Unit") must comply with the requirements of 20.4.1.500 NMAC incorporating of 40 CFR §264.90(a)(2) for regulated units, which requires compliance with 20.4.1.500 NMAC incorporating 40 CFR §§264.91 through 264.100 for purposes of detecting, characterizing and responding to releases to the aquifer. In accordance with 20.4.1.500 NMAC incorporating §264.100(d), in conjunction with a corrective action program, a groundwater monitoring program must be implemented to demonstrate the effectiveness of the corrective action program, and must be based on the requirements for a compliance monitoring program and must be as effective as that program in determining compliance with the groundwater protection standard under 20.4.1.500 NMAC incorporating §264.92 and in determining the success of the corrective action program under 20.4.1.500 NMAC incorporating §264.199(e).

Thus, the Post-Closure Care Permit Application must address, in particular, the requirements of 20.4.1.500 NMAC incorporating 40 CFR §§264.97, 264.99 and 264.100 as amended July 14, 2006, for establishing a compliance groundwater monitoring program that properly integrates into the ongoing corrective action program at the Facility.

Response to Comment 1:
The Unlined Well is not currently, nor ever has been, permitted as a hazardous waste treatment, storage, or disposal (TSD) Regulated Unit. The Person Generating Station groundwater contamination is a result of an unplanned release that, once discovered, was immediately addressed through a Corrective Action program, as currently permitted under the 2000 Post-Closure Care Permit for the site. The historical and ongoing Corrective Action/post-closure care activities at the Person Generating Station establish a fully compliant groundwater monitoring program that meets both the letter and intent of the applicable regulatory requirements of groundwater cleanup, as is currently being implemented under the operating 2000 Post-Closure Care Permit.

Specific requirements of 40 CFR §§264.97, 264.99 and 264.100 for groundwater monitoring programs that are otherwise not provided for in the regulations and/or that are applicable to the ongoing groundwater Corrective Action activities at Person Generating Station are included in both the current operating Post-Closure Care Permit and this Application.

B. SECURITY PROVISIONS (SECTION 2.2)

2. The Post-Closure Care Permit Application must document that warning signs stating "Danger-Unauthorized Personnel Keep Out" in both English and Spanish are to be posted at the entrance and the fence at the Facility in sufficient numbers to be seen and legible from 25 feet away, in accordance with 20.4.1.500 NMAC incorporating 40 CFR §264.14(c).

Response to Comment 2:
The signage requirements are being met at the Person Generating Station; signs reading "Danger –Unauthorized Personnel Keep Out" are posted in both Spanish and English on the perimeter fencing and are legible from a distance of 25 feet. Additional text has been added to Section 2.2 to address this comment.

C. INSPECTION PROVISIONS (SECTION 2.3)

3. The Post-Closure Care Permit Application, in accordance with 20.4.1.500 NMAC incorporating 40 CFR §264.15(c), must specify that the Applicant shall remedy any imminent or already occurring deterioration or malfunction of equipment or structures revealed during an inspection.

Response to Comment 3:
As indicated in Section 2.3, the security fencing, facility gates, and groundwater monitoring and extraction wells are inspected semiannually. These inspections are conducted in order to maintain both the integrity of the security at the site and of the functioning of the well network. Accordingly, any breaches in the fencing or issues with wells that would compromise the function of a monitoring or extraction well are repaired as soon as practical in order to avoid noncompliance with the Corrective Action activities. Additional text has been added to Section 2.3 to address this comment.

4. The Post-Closure Care Permit Application must include, in table form, a comprehensive Inspection Checklist for inspecting the Facility, including any related health and safety equipment, security fences, and operating and structural equipment (including all groundwater monitoring and extraction wells) that are used to prevent, detect, or respond to environmental or human health hazards. The semi-annual inspection schedule for the groundwater monitoring and extraction wells may be coordinated with the scheduled groundwater sampling events.

Response to Comment 4:
A copy of the data fields on the semiannual inspections has been added to the Post-Closure Care Permit Application as Table 14 and the text in Section 2.3 has been updated accordingly; this information has been provided in order to demonstrate compliance with applicable inspection provisions of 40 CFR §264.15(b), (c), or (d) being requested by NMED.

5. The Post-Closure Care Permit Application must state that a copy of past inspection reports will be maintained at the Facility and the Applicant's offices for a minimum of three (3) years from the date of the inspection.

Response to Comment 5:
As indicated in Section 2.3, all inspections performed at the site become part of the site operating records that are maintained at the PNM offices in Albuquerque for a minimum of three years from the date of the inspection, per 40 CFR §264.15(d).

6. The Post-Closure Care Permit Application must state that inspection of the cap at the Regulated Unit will be continued unless its removal has been approved by NMED.

Response to Comment 6:
The paragraph of Section 2.3 discussing inspections at the Unlined Well has been modified to address this comment.

Additional information: Section 3.2.1 was modified to include information on a recent Corrective Action Compliance Evaluation inspection that was performed in September 2008, from which no violations were noted at the time of the inspection.

D. EMERGENCY EQUIPMENT (SECTION 2.4.1)

7. The Post-Closure Care Permit Application must specify the type and number of portable fire extinguishers, fire control equipment, spill control equipment and decontamination equipment available at the Facility, and any other equipment required by 20.4.1.500 NMAC incorporating 40 CFR §264.32(c).

Response to Comment 7:
Details of the emergency equipment present at the GWTS have been added to the text in Section 2.4.1 (location of emergency equipment at the GWTS is shown on Figure 5).

E. TESTING AND MAINTENANCE OF EMERGENCY EQUIPMENT (SECTION 2.4.2)

8. The Post-Closure Care Permit Application must include an Inspection Checklist that documents the date and time of the testing, maintenance or repairs (if necessary) of the emergency equipment at the Facility as required by 20.4.1.500 NMAC incorporating 40 CFR §264.33.

Response to Comment 8:
An Inspection Checklist is not specifically required by 40 CFR §264.33; however, PNM agrees to provide a copy of the data fields completed when inspecting the emergency equipment at the GWTS (Table 14), including documentation of the date and time of the testing, and any necessary maintenance or repairs. See also response to Comment 4.

F. ACCESS TO COMMUNICATIONS AND ALARM SYSTEMS (SECTION 2.4.3)

9. The Post-Closure Care Permit Application must specify the type of communications systems capable of providing internal communications (20.4.1.500 NMAC incorporating 40 CFR §264.32(a)) and summoning emergency assistance from local police departments, fire departments, or State or local emergency response teams (20.4.1.500 NMAC incorporating 40 CFR §264.32(b)).

Response to Comment 9:
The following details of the communications systems available at the site have been added to Section 2.4.3: In the event that external emergency assistance is required, personnel have immediate access to both the facility alarm system and external communication via a hard-wired telephone and cell phones. The GWTS system itself is equipped with an automated shutdown and alarm system that, upon emergency shutdown, an alarm is sent via telephone lines to the Reeves Generating Station control room; the control room operators then notify the Reeves Generating Station maintenance supervisor who dispatches trained personnel to inspect the GWTS and restart the system, if needed.

G. ARRANGEMENTS WITH LOCAL AUTHORITIES (SECTION 2.4.4)

10. The Post-Closure Care Permit Application must include a copy of the documentation required by 20.4.1.500 NMAC incorporating 40 CFR §264.37 that is submitted to police and fire departments as well as emergency response teams to familiarize them with the hazardous waste properties and associated hazards at the Facility.

Response to Comment 10:
Because the Person Generating Station is currently undergoing Corrective Action under a Post-Closure Care Permit, there are no hazardous waste operations at the site that would require detailed emergency response procedures be established with local authorities as typically required for active TSD Regulated Units. Other than potential fire or medical responders to an emergency 9-1-1 call, the site falls under the jurisdiction of the Bernalillo County Sheriff (South Valley Area Command), all of whom are listed as emergency contacts. Note however, that the PNM power operations adjacent to the Person Generating Station has regular contact with the Bernalillo county Sheriff's department because of its potential as a terrorist target and contingencies related to these activities are more than adequate to ensure rapid response to security or fire emergencies.

H. CONTINGENCY PLAN AND EMERGENCY PROCEDURES (SECTION 2.4.5)

General Response to Comments 11 – 15 on Section 2.4.5:
Post-Closure Care Permit requirements defined by 40 CFR §270.28 and applicable portions of 40 CFR §270.14(b) do not specifically require a Contingency Plan for the facility. However, PNM recognizes it has a responsibility to safely conduct Corrective Actions at the site and to protect human health and the environment as a steward of the site; as such, an abbreviated Contingency Plan is provided to meet these responsibilities.

11. As required by 20.4.1.500 NMAC incorporating 40 CFR §264.52(d), the Post-Closure Care Permit Application must include the addresses of all persons qualified to act as emergency coordinator who are listed in the contingency plan.

Response to Comment 11:
The addresses of qualified emergency Coordinators have been added to the in-text table in Section 2.4.4.

12. The Post-Closure Care Permit Application must indicate that a copy of the contingency plan will be maintained at the Facility and as part of the operating record at the Applicant's office (20.4.1.500 NMAC incorporating 40 CFR §264.53a)). In addition, a copy of the contingency plan must be submitted to police and fire departments as well as emergency response teams that may be called upon to provide emergency services (20.4.1.500 NMAC incorporating 40 CFR § 264.53(b)).

Response to Comment 12:
A copy of the Contingency Plan as incorporated in the operating Post-Closure Care Permit and emergency contingencies as incorporated in the site Health and Safety Plan and Operations and Maintenance (O&M) Manual are available at the site and at PNM's Albuquerque offices; text has been added to Section 2.4.5 to list the contingency information available for the site. As to the distribution of the plan to local authorities and emergency response teams, please see response to Comment 10 and general response to comments on Section 2.4.5.

13. The Post-Closure Care Permit Application must include provisions to amend the contingency plan in the event that the list of emergency coordinators changes or any of the other conditions listed in 20.4.1.500 NMAC incorporating 40 CFR §264.54 occur.

Response to Comment 13:
The Contingency Contact list will be updated by sending page revisions and a notification to NMED should any such changes occur during the length of the operating permit. This text has been added to Section 2.4.5.

14. One of the two people listed in the Permit Application must be designated the primary emergency coordinator in the Post-Closure Care Permit Application pursuant to 20.4.1.500 NMAC incorporating 40 CFR §264.52(d).

Response to Comment 14:
A primary emergency coordinator is now identified in the Contingency Contact list in Section 2.4.4.

15. Pursuant to 20.4.1.500 NMAC incorporating 40 CFR §264.52, the contingency plan in the Post-Closure Care Permit Application must describe the actions Facility personnel are to take to comply with 20.4.1.500 NMAC incorporating 40 CFR §264.51 and 40 CFR §264.56 in response to fires, explosions or any release hazardous waste or hazardous waste constituents to the air, soil or surface waste at the Facility.

Response to Comment 15:
There are not significant hazards or releases of concern for the site's post-closure care program (Section 2.4.5.2). Information on responses to fires or accidental releases is addressed in Sections 2.4.5.3 and 2.4.5.5, respectively). There are no flammable or explosive materials at the GWTS, as addressed in Section 2.4.5.4.

I. RECORDKEEPING AND REPORTING (SECTION 2.5)

16. The Post-Closure Care Permit Application must state that during the post-closure care period, semi-annual progress reports will be submitted to NMED providing the following information (Table 3 of this NOD):

Response to Comment I-16:
PNM currently provides a summary of network well sampling (semiannual and annual) on an annual basis (see Section 4.5) and requests that this reporting frequency be maintained. A number of individual items listed below are provided in the annual report and other items requested can be added. Please refer to individual subsections of this comment for additional information.

a. A discussion of corrective-measures-related activities undertaken during the time period, including the total amount of water pumped from the extraction wells and treated in the Groundwater Treatment System (GWTS). An estimate of the amount of contaminant recovered from the aquifer during each reporting period must also be included;

Response to Comment I-16(a):
The annual report summarizes progress on Corrective Action measures. The total amount of water pumped from the extraction wells and treated at the GWTS will be added to the annual report (see Section 4.5). PNM requests that the estimate of containment achieved be delineated in the updated groundwater plumes that show the progress made in reducing the area of contamination.

b. Individual groundwater extraction rates and the volume of groundwater pumped from each of the extraction wells (VEW, EW-1, EW-2, EW-3 and EW-4);

Response to Comment I-16(b):
The volume of groundwater pumped from each extraction well will be added to the annual report (see Section 4.5).

c. Data tables summarizing the results of the groundwater level measurements including reference elevation for each monitor well and the depth to water;

Response to Comment I-16(c):
The annual report provides, and will continue to, the results of the groundwater level measurements, including reference elevations (actual elevation above mean sea level of the well casing heads) and depth to water in feet.

d. Data tables summarizing detected Appendix IX analytes, if any, which are not listed on Table 1 of this NOD;

Response to Comment I-16(d):
The annual report provides, and will continue to, the analytical results of all detected analytes, including the three hazardous constituents identified for defining Corrective Action progress at the site and any detected Appendix IX analytes.

e. The data tables required in the preceding sections must include all historical data in addition to that from the most recent sampling event;

Response to Comment I-16(e):
The annual data report provides current and historical data for the three hazardous constituents that define Corrective Action progress at the site. PNM requests that historical data for the new reporting requirement for groundwater extraction volumes (per I-16(a) and I-16(b)), elevations (per I-16(c)) be initiated and retroactive only to the time the permit application is approved. Appendix IX constituents have only been analyzed for historically at the upgradient background well (PSMW-07R) and no analytes have been detected that are indicative of contamination migration from off-site sources (infrequently and at trace concentrations). For the new reporting requirements requested by NMED for Appendix IX constituents, PNM will initiate to the time the permit application is approved.

f. A discussion based on current activities and sampling and analysis results of any changes in the locations and levels of contamination at the Facility; identified migration pathways; impacts (or potential impacts) on human health and the environment since the last reporting period; and, any recommendations for changes to the corrective measures or monitoring systems; and

Response to Comment I-16(f):
The annual data report provides, and will continue to, data and discussion of changes in location and levels of contamination in groundwater. Any migration pathways or impacts to human health or the environment that might require evaluation as a result of the recent sampling will be addressed in the annual reports, including and recommendations for changes to the Corrective Action activities or monitoring system.

g. The Applicant must prepare graphs for each monitor well in the monitor well system plotting groundwater elevations and concentrations of hazardous constituents against time.

Response to Comment I-16(g):
Please see response to Comment I-16(e).

J. PERSONNEL TRAINING PROGRAM REQUIREMENTS (SECTION 2.6)

16. In accordance with 20.4.1.500 NMAC incorporating 40 CFR §264.16(a)(2), the Post-Closure Care Permit Application must state that Facility personnel will be trained in the implementation of the contingency plan.

Response to Comment J-16:
This is specifically mentioned in Paragraph 2 of this section, but has also been added to the bullet list.

K. POST-CLOSURE COST ESTIMATE (SECTION 2.8)

17. The Post-Closure Care Permit Application must include a revised cost estimate for post- closure care and corrective action reflecting the changes associated with implementation of the corrective action required for the post-closure care period. These changes include the costs associated with the sampling and analysis of water samples collected from the additional monitor wells required by NMED for post-closure care that were not included in the Applicant's June 2007 Post-Closure Care Permit Application.

Response to Comment 17:
The most recent cost estimate provided as Attachment 2 to the Application is an overestimate of post-closure, as it includes all Corrective Action activities under the current operating permit. A revised cost estimate reflecting the sampling and analysis requirements of this NOD will be submitted to NMED within 60 days of receipt of the new operating permit for the Person Generating Station.

18. The Post-Closure Care Permit Application must state that the post-closure cost estimate must be adjusted for inflation as specified in 20.4.1.500 NMAC incorporating 40 CFR §264.144(b). Revisions of the post-closure care cost estimate will be submitted to NMED 60 (sixty) days prior to the anniversary date of the establishment of the financial instrument used to comply with 40 CFR §264.145.

Response to Comment 18:
Annual cost estimates are submitted to NMED on or before January 31st of each calendar year that include adjustments based on a recalculation of costs in current dollars, per the requirements in 40 CFR §264.144(b).

L. PROOF OF INSURANCE (SECTION 2.9)

19. The Post-Closure Care Permit Application must state that upon cancellation of the insurance policy by either the Applicant or the insurer, the Applicant shall deliver written notice of this cancellation to NMED. This cancellation shall become effective 60 calendar days after a copy of such written notice is received by NMED as specified in 20.4.1.500 NMAC incorporating 40 CFR § 264.151(j)(2).

Response to Comment 19:
This information is provided in Condition 2(d) of the Financial Assurance, provided as Attachment 3 to the Application. Additional text has been added to Section 2.9 to address this comment.

M. FINANCIAL ASSURANCE FOR POST-CLOSURE CARE

20. The Post-Closure Care Permit Application must state that the Applicant will submit updated information to NMED demonstrating that the Applicant meets the financial assurance test after the close of each succeeding fiscal year as specified in 20.4.1.500 NMAC incorporating 40 CFR §264.145(f)(5).

Response to Comment 20:
Text has been added to Section 2.9 stating that PNM will submit updated information to NMED demonstrating that PNM meets the financial assurance test after the close of each succeeding fiscal year. This is submitted with the annual revision to the cost estimate (see also response to Comments 17 and 18).

21. As the rating for the most recent bond issued to the Applicant for the cost of post-closure care has been downgraded, as required by 20.4.1.500 NMAC incorporating 40 CFR §264.145(f)(ii), the Post-Closure Care Permit Application must now state that the Applicant will meet the requirements under 20.4.1.500 NMAC incorporating 40 CFR §264.145(f)(i) for financial assurance.

Response to Comment 21:
Current rating for PNM is Baa3 (Moody's), which is still satisfactory under 40 CFR §264.145(f)(1)(ii). PNM provides this info to the NMED in an annual updated financial assurance information letter that is submitted 90 days after the close of PNM's fiscal year; the most current financial assurance was mailed to NMED on 3/30/09.

N. UNLINED WELL CORRECTIVE ACTION PLAN (SECTION 3.2)

22. The Post-Closure Care Permit Application must state that the Applicant will submit a work plan to NMED for approval that addresses removal of the RCRA cap, SVE system components and vapor monitoring wells.

Response to Comment 22:
Text has been added to Section 3.0 to indicate that a Work Plan for the removal of the RCRA cap and remaining SVE system components, and vapor monitoring wells will be submitted to NMED for approval.

23. The Post-Closure Care Permit Application must state that the Applicant will submit to NMED, by registered mail, a certification that Corrective Action for Soil was performed in accordance with the specifications in the current Post-Closure Care Plan. This certification must be signed by the Applicant and an independent professional engineer registered in New Mexico (20.4.1.500 NMAC incorporating 40 CFR §264.115).

Response to Comment 23:
The certification requirements of 40 CFR §264.115 apply to Regulated Units of permitted TSD Facilities and do not directly apply to the Unlined Well, which is not permitted as a Regulated Unit.

PNM requests that NMED define a path to completion of closure for the Unlined Well that is consistent with its permitted status.

24. The Post-Closure Care Permit Application must state that no later than the submission of the certification of completion of Corrective Action for Soil at the Facility, the Applicant will submit to the authority with jurisdiction over local land use and NMED, a revised survey plat indicating the location and dimensions of the Regulated Unit with respect to permanently surveyed landmarks. The plat must be prepared and certified by a professional land surveyor. The revised plat must contain a note, prominently displayed, which states the Applicant's obligation to restrict further disturbance of the Regulated Unit beyond that approved by NMED for Alternate Use of the land (20.4.1.500 NMAC incorporating 40 CFR §264.116).

Response to Comment 24:
Please see response to Comment 23.

O. NFA RECOMMENDATION (SECTION 3.3)

25. Soil sampling results suggest that the concentrations of hazardous constituents in soil at the Regulated Unit are below NMED soil screening standards and no longer pose an unacceptable risk to human health, the environment, or groundwater. However, as the Regulated Unit is the source of the groundwater contamination underlying the Facility, No Further Action (NFA) status can not be granted until corrective action for the groundwater contamination is completed.

Response to Comment 25:
All aspects of the NMED-approved 2000 CAP for demonstrating that soil remediation goals for the Unlined Well have been met. The ongoing Corrective Action activities are distinctly different from the soil remediation at the Unlined Well and are directed at meeting cleanup goals for groundwater at the site. Please see also response to Comment 23.

P. REQUEST FOR ALTERNATE USES (SECTION 3.4)

26. The Post-Closure Care Permit Application must state that before an alternate use for the surface land at the Regulated Unit is implemented, the Applicant will notify NMED in writing of the proposed use and obtain approval from NMED for the proposed land use.

Response to Comment 26:
Text has been added to Section 3.4 to indicate that PNM will notify NMED and obtain approval of the proposed land use at the Unlined Well prior to implementing an alternate land use.

Q. GROUNDWATER FINAL CLEANUP LEVELS AND ATTAINMENT DEMONSTRATION (SECTION 4.1.2)

27. The compliance period is the number of years equal to the active life of the waste management area (July 1976 to October 1983, 7 years) including the closure period (October 1983 to September 1988, 5 years), thus a total of 12 years. As the Applicant is still engaged in a corrective action program at the end of the compliance period identified above, the compliance period is extended (20.4.1.500 NMAC incorporating 40 CFR §264.96(c)) until the Applicant can demonstrate the groundwater standard of 20.4.1.500 NMAC incorporating 40 CFR §264.92 has not been exceeded for a period of three consecutive years. The Post-Closure Care Permit Application must discuss extension of the compliance period due to the need to continue with corrective action at the Facility.

Response to Comment 27:
Text has been added to Section 4.1.2 to indicate that PNM is specifically requesting that the compliance period for Corrective Action activities for remediating groundwater be extended until groundwater cleanup goals (as specified in the Application, Section 4.1.2, and repeated by NMED in Table 1 of this NOD) have been met for a period of three consecutive years.

28. The Post-Closure Care Permit Application must state that the Applicant will analyze samples from compliance point monitor wells (PSMW-0 1R, PSMW-08A, PSMW- 10 and PSMW-13A) for constituents in Appendix IX annually (i.e., enhanced sampling) to determine whether additional hazardous constituents are present in the uppermost aquifer (20.4.1.500 NMAC incorporating 40 CFR §264.99(g)). The Post-Closure Care Permit Application must state which Appendix IX constituents the Applicant is proposing to sample for the purpose of enhanced sampling in the groundwater.

Response to Comment 28:
Text addressing these additional sampling requirements has been added to the sampling plan summary in Section 4.5.1 under Analytical Requirements and to Table 12. Figure 14 also has been updated accordingly.

29. The Post-Closure Care Permit Application must state that if the Applicant identifies Appendix IX constituents in groundwater that are not already identified in the Permit as hazardous constituents, the Applicant may resample within one month and repeat the

Appendix IX analysis. If the second analysis confirms the presence of any new constituents the Applicant must report the concentration of these constituents to NMED within seven (7) calendar days after the completion of the second analysis and add them to the monitoring list. If the Applicant chooses not to resample, then they must report the concentrations of the new constituents to NMED within seven calendar days after completion of the initial analysis and add them to the monitoring list (20.4.1.500 NMAC incorporating 40 CFR §264.99(g)).

Response to Comment 29:
PNM agrees to resample for, and add to the constituent monitoring list, any Appendix IX constituents that are detected in groundwater above the relevant standards (the more stringent of maximum contaminant levels under the Safe Water Drinking Act or New Mexico Water Quality Control Commission standards). Text addressing this comment has been added to the sampling plan summary in Section 4.5.1 under Analytical Requirements.

R. GROUNDWATER RECOVERY WELL NETWORK AND TREATMENT SYSTEM (SECTION 4.1.4)

30. Extraction wells PSMW-25, PSMW-26 and EW-5 may be eliminated from the recovery system as proposed. The Post-Closure Care Permit Application must state that a work plan to plug and abandon these wells will be submitted to NMED.

Response to Comment 30:
Text has been added to Section 4.1.4 to indicate that a Work Plan for plugging and abandoning extraction wells PSMW-25, PSMW-26 and EW-5 will be submitted to NMED for approval.

31. If any monitoring well is to be decommissioned during the term of the Post-Closure Care Permit, the Post-Closure Care Permit Application must state that the monitor well will be replaced with an equivalent well approved by the NMED within 60 days of the date the well is taken out of service. Prior to decommissioning a well, the Applicant will notify NMED in writing of the rationale for such a decision.

Response to Comment 31:
Text has been added to Section 4.1.4 to indicate that if any monitoring well is to be decommissioned during the term of the Post-Closure Care Permit, the monitoring well will be replaced with an equivalent well approved by the NMED within 60 days of the date the well is taken out of service. PNM will notify NMED in writing of the rationale for decommissioning prior to doing so.

S. GROUNDWATER TRANSPORT (SECTION 4.2.2)

32. The Applicant must submit revised Permit Application Tables 8 and 9 summarizing the sampling and water level measurement requirements for the groundwater monitor wells proposed by the Applicant and the additional groundwater monitoring wells required by the NMED for Post-Closure Care. These groundwater monitoring wells are listed on Table 2 of this NOD.

Response to Comment 32:
Tables 12 and 13, Figure 14, and applicable text have been revised to reflect the sampling requirements listed in this comment and Table 2 of this NOD [Tables 8 and 9 summarize existing sampling requirements and Tables 12 and 13 summarize proposed sampling requirements].

33. The Applicant shall add information on groundwater monitor wells PSMW-11, PSMW-20, PSMW24C-500, PSMW27C-500, PSMW27C-600 and PSMW-37 to Permit Application Appendix C detailing well completion and construction diagrams for wells used in the monitoring network.

Response to Comment 33:
Well completion and construction diagrams for PSMW-11, PSMW- 20, PSMW24C-500, PSMW27C-500, PSMW27C-600 and PSMW-37 have been added to Appendix C.

T. DEEPER GROUNDWATER REMEDIATION (SECTION 4.3.2)

34. In order to monitor the concentration of groundwater contamination present in the deep aquifer, the following deeper groundwater monitor wells must be included in the groundwater sampling network for the site: PSMW-24C-500; PSMW-27C-500; and PSMW-27C-600. The Post-Closure Care Permit Application must be revised to include these wells.

Response to Comment 34:
Wells PSMW-24C-500; PSMW-27C-500; and PSMW-27C-600 have been added to the deeper groundwater sampling network; Tables 12 and 13, Figure 14, and the text in Sections 4.3.2, 4.4.1, and 4.4.2 have been updated to reflect these additions.

35. The Post-Closure Care Permit Application must state that additional deeper groundwater monitoring wells will be added back into the sampling program must sampling and analysis results indicate an increase in the concentration of hazardous constituents in the deep aquifer.

Response to Comment 35:
Text has been added to Section 4.3.2 to indicate that PNM will obtain approval from NMED for the addition of deeper groundwater monitoring wells back into the monitoring network should groundwater analytical results indicate an increase in the concentrations of hazardous constituents in the deep aquifer, as defined by concentrations of the three hazardous constituents for the site (PCE, 1,1,1-TCA, and 1,1-DCE) that exceed the relevant standards (the more stringent of maximum contaminant levels under the Safe Water Drinking Act or New Mexico Water Quality Control Commission standards).

36. The Post-Closure Care Permit Application must include a description of how all the deeper groundwater monitoring wells will be maintained. All deeper groundwater monitor wells must be included in the semi-annual inspection schedule for the Facility.

Response to Comment 36:
Text has been added to Section 2.3 to indicate that well inspections will include all monitoring and extraction wells that have not received NMED approval for abandonment and plugging. Text has been added to Section 4.3.2 to address the inspection, maintenance, and repair (if needed) requirements of this comment.

U. POST-CLOSURE CARE PLAN GROUNDWATER REMEDIATION (SECTION 4.4)

37. The Post-Closure Care Permit Application must state that the Applicant shall continue operation of the Groundwater Treatment System (GWTS) for shallow groundwater until compliance with cleanup standards is attained for all monitor wells at the site for a period of at least three (3) years (20.4.1.500 NMAC incorporating 40 CFR §264.100(f)).

Response to Comment 37:
Text in Section 4.4, last paragraph, Bullet 1 has been modified to state that "continued operation of the GWTS for shallow groundwater will continue until compliance with cleanup levels, the more stringent of maximum contaminant levels under the Safe Water Drinking Act or New Mexico Water Quality Control Commission standards for the three hazardous constituents for the site (PCE, 1,1,1-TCA, and 1,1-DCE), is attained for all monitor wells at the site for a period of three consecutive years". Note: PNM is assuming that the words "at least" in the comment refer to the fact that some individual monitoring wells will have reached 3 years of compliance with cleanup levels prior to the entire network obtaining 3 years of compliance and thus, is not directly relevant to how compliance for the entire site will be measured and the shutdown of the GWTS determined.

38. The Post-Closure Care Permit Application must state that semi-annual sampling and groundwater level measurements of all four shallow monitor wells and five extraction wells proposed by the Applicant and the annual sampling and semi-annual groundwater level measurements of seven additional shallow monitor wells required by NMED shall continue in accordance with the requirements of the Post-Closure Care Permit and scheduling on Table 3 of this NOD.

Response to Comment 38:
Tables 12 and 13, Figure 14, and the text in Sections 4.3.2, 4.4.1, and 4.4.2 have been updated to reflect these additions. See also response to Comment 34.

39. The Post-Closure Care Permit Application must state that once all wells have achieved three years of compliance, a phased shutdown of the GWTS will be initiated. This will entail an initial shutdown of the GWTS for a period of one year. If the concentration of constituents of concern increases above the concentration limits in any wells, the GWTS will be operated for additional six month periods of alternating shutdown and operation for a total of three years. This three year period will include semi-annual groundwater sampling and water level measurement at all monitoring wells in the sampling plan. The Post-Closure Care Permit Application must address how the

Applicant proposes to proceed if the concentrations of constituents of concern are above the concentration limits after the three year period of the shutdown of the GWTS.

Response to Comment 39:
The process of phased shutdown outlined by NMED in this comment is reflected accurately in Bullets 1, 2, and 3 of Section 4.4.2. The text in Bullet 3 indicates that PNM may elect to prepare a technical infeasibility demonstration or propose monitored natural attenuation if the concentrations of constituents of concern are above the cleanup levels after the three-year period of phased shutdown of the GWTS. A request to prepare a technical infeasibility study or proposal for monitored natural attenuation will be submitted as a Work Plan to NMED prior to initiation of either option.

V. POINT OF COMPLIANCE AND DOWNGRADIENT WELLS (SECTION 4.4.1)

40. NMED approves using monitoring well PSMW-01R as a point of compliance well at the Facility in accordance with 20.4.1.500 NMAC incorporating 40 CFR §264.95. The Post-Closure Care Permit Application must state that all groundwater monitoring wells at the Facility shall be treated as compliance wells and groundwater shall attain the approved cleanup levels before ending corrective action.

Response to Comment 40:
Text in Section 4.4.1 has been clarified to reflect this definition of compliance wells for the Person Generating Station.

41. NMED approves eliminating the following shallow monitor wells from further sampling and groundwater level measurement: PSMW-01B; PSMW-02; PSMW-03; PSMW-03B; PSMW- 04; PSMW-06R; PSMW-08B; PSMW-09; PSMW-13B; PSMW-14; PSMW-19; PSMW-19X; PSMW-21; PSMW-23; PSMW-25; PSMW-26; PSMW-28; PSMW-29; PSMW-30; PSMW-31; PSMW-32; PSMW-33; PSMW-34; PSMW-35; and, PSMW-36. The Post-Closure Care Permit Application must state that some or all of these shallow groundwater monitoring wells may be added back into the sampling program should sampling and analysis results indicate an increase in concentration of hazardous constituents in the shallow aquifer. Thus, these wells must be maintained.

Response to Comment 41:
Text has been added to Section 2.3 to indicate that well inspections include all monitoring and extraction wells that have not received NMED approval for abandonment and plugging. PNM intends to apply for approval from NMED to plug and abandon wells from the former monitoring network that are no longer required to be sampled in a phased approach and over several years. Text has also been added to Section 4.4.1 to address the inspection and maintenance requirements of this comment for the monitoring wells that will be removed from current sampling requirements. See also response to Comment 36.

42. Pursuant to 20.4.1.500 NMAC incorporating 40 CFR §264.97, the groundwater monitoring system must consist of a sufficient number of wells to yield groundwater samples from the uppermost aquifer that represent the quality of background water at

the Facility and that pass the point of compliance and allow for the detection of contamination when hazardous constituents have migrated from the Regulated Unit to the uppermost aquifer. The Post-Closure Care Permit Application must state this requirement.

Response to Comment 42:
Text has been added to Section 4.4.1 to state the requirement of 40 CFR §264.97 is met, as provided in this comment.

43. In addition to the four shallow (PSMW-0lR, PSMW-08A, PSMW-10 and PSMW-13A) groundwater monitoring wells and five extraction (VEW, EW-1, EW-2, EW-3, and EW-4) wells proposed by the Applicant for further semi-annual groundwater level measurement, and sampling and analysis using EPA Method 8260 (Table 1 of this NOD), NMED requires that groundwater at seven additional shallow monitoring wells (PSMW-11; PSMW-17; PSMW-18; PSMW-20; PSMW-22; PSMW-27; and PSMW-37) be sampled and analyzed on an annual basis. All 11 shallow and three deep groundwater monitoring wells and five extraction wells shall have the groundwater level measured on a semi-annual basis and the data used to prepare water level contour maps showing the direction and gradient of groundwater flow. The Post-Closure Care Permit Application must be revised to include the additional monitor wells required by NMED as noted on Table 2 of this NOD.

Response to Comment 43:
Tables 12 and 13, Figure 14, and the text in Sections 4.3.2, 4.4.1, and 4.4.2 have been updated to reflect these additions. See also responses to Comments 34 and 38.

44. The Applicant may request that the required water quality sampling frequency for any monitor well that has been in compliance with the cleanup levels specified in Table 1 of this NOD for three consecutive years be reduced to once a year. A written request for a Permit Modification must be provided to NMED for approval before the monitoring frequency is reduced.

Response to Comment 44:
Text allowing for this provision has been added to Section 4.4.1.

X. DEMONSTRATING ATTAINMENT OF GROUNDWATER CLEANUP LEVELS (SECTION 4.4.2)

45. As indicated in Comment 40 above, a phased shutdown of the GWTS may be initiated after all groundwater monitoring wells have attained three years of compliance meeting the groundwater protection standard as described in the Post-Closure Care Permit Application. The Post-Closure Care Permit Application must state that the Applicant will submit a work plan to NMED for approval to perform the phased shutdown of the GWTS prior to its initiation.

Response to Comment 45:
Text has been added to Section 4.4.2 Bullet 2 to indicate that PNM will submit a Work Plan for the phased shutdown of the GWTS for NMED approval prior to the initiation of the shutdown.

46. The Post-Closure Care Permit Application must state that following the initiation of GWTS shutdown, the Applicant will sample and show compliance for three years (20.6.2.4103.D NMAC) through semi-annual sampling (Table 1 of this NOD) to demonstrate attainment of the groundwater cleanup levels.

Response to Comment 46:
This comment requesting 3 years of sampling after the phased shutdown of the GWTS appears to be in conflict with the shutdown and sampling process outlined in Section 4.4 and approved in Comments 37 and 39—requiring first there be 3 years of compliance for all wells prior to GWTS shutdown and then 3 years of GWTS shutdown and startup if rebound occurs. The phased shutdown process is designed to ensure that 3 years of compliance is met in all wells and that no rebound will occur.

47. If, after the GWTS shutdown period is initiated, if any monitoring well does not achieve compliance with the groundwater protection standard, the Applicant may apply to NMED for a Permit Modification to demonstrate technical infeasibility to achieve cleanup levels in accordance with 20.6.2.4103.E(1) NMAC. The technical infeasibility demonstration may include a substitute abatement standard(s) for the contaminant(s) that is (are) technically infeasible to clean up.

Response to Comment 47:
Comment noted.

48. After initiating GWTS shutdown, the Applicant must maintain the GWTS in operational readiness until corrective action is complete. The Applicant must add to the Post-Closure Care Permit Application a plan that includes a description of how the GWTS will be maintained. The Applicant must conduct standby readiness demonstrations on a semi-annual basis, consisting of successfully operating the GWTS for three consecutive calendar days. The standby readiness demonstration must not be conducted within seven calendar days of any groundwater sampling event.

Response to Comment 48:
Text has been added to Section 4.4.2 to indicate that during GWTS shutdown, standby readiness consisting of successful operation of the GWTS for three consecutive calendar days will be demonstrated semiannually; the standby readiness demonstration will not be conducted within seven calendar days of any groundwater sampling or gauging event.

49. The Post-Closure Care Permit Application must state that the Applicant may propose monitored natural attenuation to attain groundwater cleanup levels. If so, the Applicant must submit to NMED a Permit Modification to change the corrective measure at the Facility to monitored natural attenuation. The implementation plan for monitored natural attenuation must include:

a. A demonstration of the efficacy of monitored natural attenuation using methods and procedures in accordance with NMED and Environmental Protection Agency guidance, including an estimate of the time expected needed to reach the target cleanup goals;

b. A revised groundwater monitoring plan including validation and long-term monitoring programs; and

c. A plan to ensure that the GWTS will be maintained in operational readiness until corrective action is complete.

Response to Comment 49:
Text has been added to Section 4.4.2 Bullet 3 to indicate that if monitored natural attenuation is an option proposed for the Person Generating Station, then PNM will submit a Permit Modification to change the Corrective Action from active groundwater cleanup to monitored natural attenuation.

Y. SHALLOW GROUNDWATER RECOVERY SYSTEM (SECTION 4.4.3)

50. The Post-Closure Care Permit Application must state that the laboratory analytical results from the monthly sample collection of the influent and effluent water from the GWTS and water from the two irrigation lagoons required under the groundwater discharge permit (DP- 1006) will be included in the semi-annual reports.

Response to Comment 50:
Laboratory results from the monthly sampling of influent, effluent, and irrigation lagoons are provided to the NMED semiannually under a separate permit with NMED's Ground Water Protection and Remediation Bureau and should not be subject to dual permitting and reporting requirements. PNM will forward to the Hazardous Waste Bureau a copy of the semiannual report provided to the Ground Water Protection and Remediation Bureau.

Z. GROUNDWATER TREATMENT SYSTEM OPERATIONS AND MAINTENANCE (SECTION 4.4.4)

51. The Post-Closure Care Permit Application must state that the GWTS may be shut down for scheduled maintenance or repair for emergencies, and that the Applicant will notify NMED if the GWTS is not to operate for more than seven calendar days. The Post-Closure Care Permit Application must state that the Applicant shall provide in the operating record and the next semi- annual report information on repairs performed, the reasons for those repairs, and the aquifer response as determined by the water-level data for periods when the system does not operate for more than seven calendar days.

Response to Comment 51:
Text has been added to Section 4.4.4 to address this comment. However, PNM requests additional clarification from NMED on how "aquifer response" is to be defined and by what specific parameters it is to be measured.

AA. VOLUNTARY USE RESTRICTIONS (SECTION 4.4.6)

52. As proposed in the Post-Closure Care Permit Application PNM shall implement two voluntary groundwater use restrictions on PNM property.

    a. The first restriction which prevents the development of any new production wells on PNM property within 1,000 feet of the shallow groundwater plume that are screened within the upper 100 feet of the saturated zone will be enforced until the concentrations of hazardous constituents at all monitoring wells have been reduced to levels that would not pose an unacceptable risk to human health or the environment.

Response to Comment 52(a):
Text in Section 4.4.6, Bullet 1 has been revised to indicate that any new production wells on PNM property within 1,000 feet of the shallow groundwater plume will be designed and installed such that the screened interval is completed in a zone that is not impacted by groundwater contamination. This approach is consistent with the most recent production well installed at the site, which was within the plume boundary and with the approval of NMED Groundwater Quality Bureau and the Hazardous Waste Bureau had a screened interval in a zone not impacted by contamination.

    b. The second restriction which prevents the development of any new production well on PNM property within 200 feet of the shallow groundwater plume regardless of the screened interval will be enforced until the mean concentrations of hazardous constituents at all monitoring wells have been reduced to meet drinking water standards.

Response to Comment 52(b):
Text in Section 4.4.6, Bullet 2 has been revised to indicate that any new production wells on PNM property within 200 feet of the shallow groundwater plume will be designed and installed such that the screened interval is completed in a zone that is not impacted by groundwater contamination. This approach is consistent with the most recent production well installed at the site, which was within the plume boundary and with the approval of NMED Groundwater Quality Bureau and the Hazardous Waste Bureau had a screened interval in a zone not impacted by contamination.

PNM recommends that the current language regarding regulatory standards be retained because the groundwater cleanup levels are the most restrictive of the drinking water and groundwater standards. However, the sentence referencing Title 20 has been deleted as this regulation has been remanded.

53. The Post-Closure Care Permit Application must state that restrictions will be noted on the property plat for Persons Generating Station and filed with the Bernalillo County Zoning Division or its successor agencies. A copy of the revised plat with the restrictions noted on it will be submitted to NMED.

Response to Comment 53:
Text in Section 4.4.6 has been revised per this comment.

BB. SAMPLING AND ANALYSIS PLAN (SECTION 4.5.1)

54. The proposal in the Post-Closure Care Permit Application to collect field measurements of pH and specific conductance during purging prior to sampling from low yield wells is acceptable; however, the Post-Closure Care Permit Application must state that measurements of temperature and turbidity will also be obtained. Field measurements including the volume of water purged, whether or not the well purged dry and the depth that the sampling pump, if used, was placed during sampling and purging must be included in the semi-annual Progress Reports. Low yield wells which will be purged dry prior to sampling must have field measurements taken prior to and after purging.

Response to Comment 54:
Text in Section 4.5.1 has been revised to reflect this additional sampling of temperature, volume of water purged, whether or not the well purged dry, and the depth that the sampling pump, if used, was placed during sampling and purging; low yield wells which will be purged dry prior to sampling will have field measurements taken prior to and after purging. These field measurements will be included in the annual report that summarizes semiannual sampling results. The measurement of turbidity during well purging at this site does not yield useful data in this application, which is the measurement of compliance with groundwater standards for organic, hazardous constituents. See also response to Comment I-16.

CC. GROUNDWATER GAUGING (SECTION 4.5.2)

55. The Post-Closure Care Permit Application must state that groundwater level measurements will be performed on all wells listed in Table 2 of this NOD on a semi-annual basis. Such measurements must be obtained within 24 hours prior to purging or sampling a well or at least 48 hours after the well has been purged or sampled. Recovery rates for monitor wells that purge dry must be documented in the semi-annual Progress Report.

Response to Comment 55:
Text in Section 4.5.2 has been revised to clarify that water gauging will be conducted semiannually, as listed in revised Table 13 and that water level measurements will be obtained within 24 hours prior to the purging or sampling of a well or at least 48 hours after the well has been purged or sampled. Recovery rates for monitor wells that purge dry will be documented in the annual reporting provided to NMED.

CROSS-REFERENCE OF NMED NOD COMMENTS (FEBRUARY 10, 2009) AND REVISIONS TO THE PERSON GENERATING STATION POST-CLOSURE CARE PERMIT APPLICATION

NMED NOD Comment No.	Summary of NOD Comment	Section/Pages(s) in June 2007 Application	Section/Page(s) in Revised Application	Nature of Response and Revision to Application
1.	Because the Unlined Well ("Regulated Unit") received wastes after July 26, 1982, the application must address, in particular, requirements for establishing a compliance groundwater monitoring program that properly integrates into the ongoing corrective action program at the Facility.	Section 1.3.2, Table 1	Table 1, as applicable	The Unlined Well is not currently, nor ever has been, permitted as a hazardous waste treatment, storage, or disposal (TSD) Regulated Unit. The Person Generating Station groundwater contamination is a result of an unplanned release that, once discovered, was immediately addressed through a Corrective Action program, as currently permitted under the 2000 Post-Closure Care Permit for the site. The historical and ongoing Corrective Action/post-closure care activities at the Person Generating Station establish a fully compliant groundwater monitoring program that meets both the letter and intent of the applicable regulatory requirements of groundwater cleanup, as is currently being implemented under the operating 2000 Post-Closure Care Permit. Specific requirements of 40 CFR §§264.97, 264.99 and 264.100 for groundwater monitoring programs that are otherwise not provided for in the regulations and/or that are applicable to the ongoing groundwater Corrective Action activities at Person Generating Station are included in both the current operating Post-Closure Care Permit and this Application.
2.	The Application must document that warning signs stating "Danger-Unauthorized Personnel Keep Out" in both English and Spanish are to be posted at the entrance and the fence at the Facility in sufficient numbers to be seen and legible from 25 feet away.	Section 2.2	Section 2.2	The signage requirements are being met at the Person Generating Station; signs reading "Danger – Unauthorized Personnel Keep Out" are posted in both Spanish and English on the perimeter fencing and are legible from a distance of 25 feet. Text has been revised to address Comment 2.

NMED NOD Comment No.	Summary of NOD Comment	Section/Pages(s) in June 2007 Application	Section/Page(s) in Revised Application	Nature of Response and Revision to Application
3.	Specify that any imminent or already occurring deterioration or malfunction of equipment or structures revealed during an inspection will be remedied.	Section 2.3	Section 2.3	Text in Section 2.3 was modified to indicate that any damage or imminent or already occurring deterioration or malfunction of equipment or structures is remedied as soon a practicable.
4.	Include, in table form, a comprehensive Inspection Checklist for inspecting the Facility. The semi-annual inspection schedule for the groundwater monitoring and extraction wells may be coordinated with the scheduled groundwater sampling events.	Section 2.3	Section 2.3 Table 14	A new table (Table 14) has been added to the Application that lists the data fields included in all inspections conducted at the Person Generating Station, some of which are conducted monthly (e.g., at the groundwater treatment system [GWTS]), and some of which are conducted semiannually (e.g., well inspections).
5.	State that a copy of past inspection reports will be maintained at the Facility and the Applicant's offices for a minimum of three (3) years from the date of the inspection	Section 2.3	Section 2.3	As indicated in Section 2.3, all inspections performed at the site become part of the site operating records that are maintained at the PNM offices in Albuquerque for a minimum of three years from the date of the inspection, per specific requirements of 40 CFR §264.15(d). No change made as a result of this comment.
6.	Inspection of the cap at the [Unlined Well] shall be continued unless its removal has been approved by NMED.	Section 2.3	Section 2.3	Text in Section 2.3 modified to include this provision. Section 3.2.1 also modified to include information on a recent Corrective Action Compliance Evaluation inspection that was performed in September 2008, from which no violations were noted at the time of the inspection.
7.	Specify the type and number of portable fire extinguishers, fire control equipment, spill control equipment and decontamination equipment available at the Facility, and any other equipment required.	Section 2.4.1	Section 2.4.1	Details of the emergency equipment present at the GWTS have been added to the text in Section 2.4.1 (location of emergency equipment at the GWTS is shown on Figure 5).
8.	Include an Inspection Checklist that documents the date and time of the testing, maintenance or repairs (if necessary) of the emergency equipment at the Facility.	Section 2.4.2	Section 2.4.2	A new table (Table 14) has been added to the Application that lists the data fields included in all inspections conducted at the Person Generating Station, including documentation of the date and time of the testing, and any necessary maintenance or

NMED NOD Comment No.	Summary of NOD Comment	Section/Pages(s) in June 2007 Application	Section/Page(s) in Revised Application	Nature of Response and Revision to Application
				repairs to the GWTS. See also response to Comment 4.
9.	Specify the type of communications systems capable of providing internal communications and summoning emergency assistance from local police departments, fire departments, or State or local emergency response teams.	Section 2.4.3	Section 2.4.3	The following details of the communications systems available at the site have been added to Section 2.4.3: In the event that external emergency assistance is required, personnel have immediate access to both the facility alarm system and external communication via a hard-wired telephone and cell phones. The GWTS system itself is equipped with an automated shutdown and alarm system that, upon emergency shutdown, an alarm is sent via telephone lines to the Reeves Generating Station control room; the control room operators then notify the Reeves Generating Station maintenance supervisor who dispatches trained personnel to inspect the GWTS and restart the system, if needed.
10.	Include a copy of the documentation required by 20.4.1.500 NMAC incorporating 40 CFR §264.37 that is submitted to police and fire departments as well as emergency response teams to familiarize them with the hazardous waste properties and associated hazards at the Facility.	Section 2.4.4	Section 2.4.4	Because the Person Generating Station is currently undergoing Corrective Action under a Post-Closure Care Permit, there are no hazardous waste operations at the site that would require detailed emergency response procedures be established with local authorities as typically required for active TSD Regulated Units. Other than potential fire or medical responders to an emergency 9-1-1 call, the site falls under the jurisdiction of the Bernalillo County Sheriff (South Valley Area Command), all of whom are listed as emergency contacts. Note however, that the PNM power operations adjacent to the Person Generating Station has regular contact with the Bernalillo county Sheriff's department because of its potential as a terrorist target and contingencies related to these activities are more than adequate to ensure rapid response to security or fire emergencies.
11.	Include the addresses of all persons qualified	Section 2.4.5	Section 2.4.5	The addresses of qualified emergency Coordinators

NMED NOD Comment No.	Summary of NOD Comment	Section/Pages(s) in June 2007 Application	Section/Page(s) in Revised Application	Nature of Response and Revision to Application
	to act as emergency coordinator who are listed in the contingency plan.			have been added to the in-text table in Section 2.4.4.
12.	The Application must indicate that a copy of the contingency plan will be maintained at the Facility and as part of the operating record at the Applicant's office. In addition, a copy of the contingency plan must be submitted to police and fire departments as well as emergency response teams that may be called upon to provide emergency services.	Section 2.4.5	Section 2.4.5	A copy of the Contingency Plan as incorporated in the operating Post-Closure Care Permit and emergency contingencies as incorporated in both the site Health and Safety Plan and the Operations and Maintenance (O&M) Manual are available at the site and at PNM's Albuquerque offices. As to the distribution of the plan to local authorities and emergency response teams, please see response to Comment 10 and general response to comments on Section 2.4.5. This information has been added to text under Section 2.4.5.
13.	Include provisions to amend the contingency plan in the event that the list of emergency coordinators changes or any of the other conditions listed in 20.4.1.500 NMAC incorporating 40 CFR §264.54 occur.	Section 2.4.5	Section 2.4.5	The Contingency Contact list will be updated by sending page revisions and a notification to NMED should any such changes occur during the length of the operating permit. This text has been added to Section 2.4.5.
14.	One of the two people listed in the Permit Application must be designated the primary emergency coordinator in the Post-Closure Care Permit Application.	Section 2.4.5	Section 2.4.5	A primary emergency coordinator is now identified in the Contingency Contact list.
15.	Describe the actions Facility personnel are to take in response to fires, explosions or any release hazardous waste or hazardous waste constituents to the air, soil or surface waste at the Facility.	Section 2.4.5	Section 2.4.5	There are not significant hazards or releases of concern for the site's post-closure care program (Section 2.4.5.2). Information on responses to fires or accidental releases is addressed in Sections 2.4.5.3 and 2.4.5.5, respectively). There are no flammable or explosive materials at the GWTS, as addressed in Section 2.4.5.4.

NMED NOD Comment No.	Summary of NOD Comment	Section/Pages(s) in June 2007 Application	Section/Page(s) in Revised Application	Nature of Response and Revision to Application
I-16.	The Application must state that during the post-closure care period, semi-annual progress reports will be submitted to NMED providing the following information (Table 3 of this NOD):	Section 2.5	Section 4.5	PNM currently provides a summary of network well sampling (semiannual and annual) on an annual basis (Section 4.5) and requests that this reporting frequency be maintained.
I-16(a).	A discussion of corrective-measures-related activities undertaken during the time period, including the total amount of water pumped from the extraction wells and treated in the Groundwater Treatment System (GWTS). An estimate of the amount of contaminant recovered from the aquifer during each reporting period must also be included.	Section 2.5	Section 4.5	The annual report summarizes progress on Corrective Action measures. The total amount of water pumped from the extraction wells and treated at the GWTS will be added to the annual report (Section 4.5). PNM requests that the estimate of containment achieved be delineated in the updated groundwater plumes that show the progress made in reducing the area of contamination.
I-16(b).	Individual groundwater extraction rates and the volume of groundwater pumped from each of the extraction wells (VEW, EW-1, EW-2, EW-3 and EW-4)	Section 2.5	Section 4.5	The volume of groundwater pumped from each extraction well will be added to the annual report (see Section 4.5).
I-16(c).	Data tables summarizing the results of the groundwater level measurements including reference elevation for each monitor well and the depth to water.	Section 2.5	Section 4.5	The annual report provides, and will continue to, the results of the groundwater level measurements, including reference elevations (actual elevation above mean sea level of the well casing heads) and depth to water in feet.
I-16(d).	Data tables summarizing detected Appendix IX analytes, if any, which are not listed on Table 1 of this NOD.	Section 2.5	Section 4.5	The annual report provides, and will continue to, the analytical results of all detected analytes, including the three hazardous constituents identified for defining Corrective Action progress at the site and any detected Appendix IX analytes.

NMED NOD Comment No.	Summary of NOD Comment	Section/Pages(s) in June 2007 Application	Section/Page(s) in Revised Application	Nature of Response and Revision to Application
I-16(e).	The data tables required in the preceding sections must include all historical data in addition to that from the most recent sampling event.	Section 2.5	Section 4.5	The annual data report provides, and will continue to, current and historical data for the three hazardous constituents that define Corrective Action progress at the site. PNM requests that historical data for the new reporting requirement for groundwater extraction volumes (per I-16(a) and I-16(b)), elevations (per I-16(c)) be initiated and retroactive only to the time the permit application is approved. Appendix IX constituents have only been analyzed for historically at the upgradient background well (PSMW-07R) and no analytes have been detected that are indicative of contamination migration from off-site sources (infrequently and at trace concentrations). For the new reporting requirements requested by NMED for Appendix IX constituents, PNM will initiate to the time the permit application is approved.
I-16(f).	A discussion based on current activities and sampling and analysis results of any changes in the locations and levels of contamination at the Facility; identified migration pathways; impacts (or potential impacts) on human health and the environment since the last reporting period; and, any recommendations for changes to the corrective measures or monitoring systems.	Section 2.5	Section 4.5	The annual data report provides, and will continue to, data and discussion of changes in location and levels of contamination in groundwater. Any migration pathways or impacts to human health or the environment that might require evaluation as a result of the recent sampling will be addressed in the annual reports, including and recommendations for changes to the Corrective Action activities or monitoring system.
I-16(g).	The Applicant must prepare graphs for each monitor well in the monitor well system plotting groundwater elevations and concentrations of hazardous constituents against time.	Section 2.5	n/a	Please see response to Comment I-16(e).
J-16.	State that Facility personnel will be trained in the implementation of the contingency plan.	Section 2.6	Section 2.6	This is specifically mentioned in Paragraph 2 of this section, but has also been added to the bullet list.

NMED NOD Comment No.	Summary of NOD Comment	Section/Pages(s) in June 2007 Application	Section/Page(s) in Revised Application	Nature of Response and Revision to Application
17.	Include a revised cost estimate for post-closure care and corrective action reflecting the changes associated with implementation of the corrective action required for the post-closure care period. These changes include the costs associated with the sampling and analysis of water samples collected from the additional monitor wells required by NMED for post-closure care that were not included in the Applicant's June 2007 Post-Closure Care Permit Application.	Section 2.8	Section 2.8	The most recent cost estimate provided as Attachment 2 to the Application is an overestimate of post-closure, as it includes all Corrective Action activities under the current operating permit. A revised cost estimate reflecting the sampling and analysis requirements of this NOD will be submitted to NMED within 60 days of receipt of the new operating permit for the Person Generating Station
18.	The post-closure cost estimate must be adjusted for inflation and revisions of the post-closure care cost estimate will be submitted to NMED 60 (sixty) days prior to the anniversary date of the establishment of the financial instrument used to comply with 40 CFR §264.145.	Section 2.8	Section 2.8	Annual cost estimates are submitted to NMED on or before January 31st of each calendar year that include adjustments based on a recalculation of costs in current dollars, per the requirements in 40 CFR §264.144(b).
19.	Upon cancellation of the insurance policy by either the Applicant or the insurer, the Applicant shall deliver written notice of this cancellation to NMED. This cancellation shall become effective 60 calendar days after a copy of such written notice is received by NMED.	Section 2.9	Section 2.9	This information is provided in Condition 2(d) of the Financial Assurance, provided as Attachment 3 to the Application. Additional text has been added to Section 2.9 to address this comment.
20.	The Application must state that the Applicant will submit updated information to NMED demonstrating that the Applicant meets the financial assurance test after the close of each succeeding fiscal year.		Section 2.9	Text has been added stating that PNM will submit updated information to NMED demonstrating that PNM meets the financial assurance test after the close of each succeeding fiscal year. This is submitted with the annual revision to the cost estimate (see also response to Comments 17 and 18).

NMED NOD Comment No.	Summary of NOD Comment	Section/Pages(s) in June 2007 Application	Section/Page(s) in Revised Application	Nature of Response and Revision to Application
21.	As the rating for the most recent bond issued to the Applicant for the cost of post-closure care has been downgraded, as required by 20.4.1.500 NMAC incorporating 40 CFR §264.145(f)(ii), the Post-Closure Care Permit Application must now state that the Applicant will meet the requirements under 20.4.1.500 NMAC incorporating 40 CFR §264.145(f)(i) for financial assurance.	Section 2.9	Section 2.9	Current rating for PNM is Baa3 (Moody's), which is still satisfactory under 40 CFR §264.145(f)(1)(ii). PNM provides this info to the NMED in an annual updated financial assurance information letter that is submitted 90 days after the close of PNM's fiscal year; the most current financial assurance was mailed to NMED on 3/30/09.
22.	The Application must state that the Applicant will submit a work plan to NMED for approval that addresses removal of the RCRA cap, SVE system components and vapor monitoring wells.	Section 3.2	Section 3.0	Text has been added to indicate that a Work Plan for the removal of the RCRA cap and remaining SVE system components, and vapor monitoring wells will be submitted to NMED for approval.
23.	The Application must state that the Applicant will submit to NMED, by registered mail, a certification that Corrective Action for Soil was performed in accordance with the specifications in the current Post-Closure Care Plan. This certification must be signed by the Applicant and an independent professional engineer registered in New Mexico (20.4.1.500 NMAC incorporating 40 CFR §264.115).	Section 3.2	n/a	The certification requirements of 40 CFR §264.115 apply to Regulated Units of permitted TSD Facilities and do not directly apply to the Unlined Well, which is not permitted as a Regulated Unit. PNM requests that NMED define a path to completion of closure for the Unlined Well that is consistent with its permitted status.
24.	The Application must state that no later than the submission of the certification of completion of Corrective Action for Soil at the Facility, the Applicant will submit a revised survey plat indicating the location and dimensions of the Regulated Unit with respect to permanently surveyed landmarks, prepared and certified by a professional land surveyor and containing a note, prominently displayed, which states the Applicant's obligation to restrict further disturbance of the Regulated Unit beyond that approved by NMED for Alternate Use of the land.	Section 3.2	n/a	Please see response to Comment 23.

NMED NOD Comment No.	Summary of NOD Comment	Section/Pages(s) in June 2007 Application	Section/Page(s) in Revised Application	Nature of Response and Revision to Application
25.	Soil sampling results suggest that the concentrations of hazardous constituents in soil at the Regulated Unit are below NMED soil screening standards and no longer pose an unacceptable risk to human health, the environment, or groundwater. However, as the Regulated Unit is the source of the groundwater contamination underlying the Facility, No Further Action (NFA) status can not be granted until corrective action for the groundwater contamination is completed.	Section 3.3	n/a	All aspects of the NMED-approved 2000 CAP for demonstrating that soil remediation goals for the Unlined Well have been met. The ongoing Corrective Action activities are distinctly different from the soil remediation at the Unlined Well and are directed at meeting cleanup goals for groundwater at the site. Please see also response to Comment 23.
26.	The Application must state that before an alternate use for the surface land at the Regulated Unit is implemented, the Applicant will notify NMED in writing of the proposed use and obtain approval from NMED for the proposed land use.	Section 3.4	Section 3.4	Text has been added to indicate that PNM will notify NMED and obtain approval of the proposed land use at the Unlined Well prior to implementing an alternate land use as part of the Work Plan submitted for the removal of the RCRA cap and remaining SVE system components.
27.	The Application must discuss extension of the compliance period due to the need to continue with corrective action at the Facility.	Section 4.1.2	Section 4.1.2	Text has been added to indicate that PNM is specifically requesting that the compliance period for Corrective Action activities for remediating groundwater be extended until groundwater cleanup goals (as specified in the Application, Section 4.1.2, and repeated by NMED in Table 1 of this NOD) have been met for a period of three consecutive years.
28.	The Application must state that samples from compliance point monitor wells (PSMW-0 1R, PSMW-08A, PSMW- 10 and PSMW-13A) will be analyzed for constituents in Appendix IX annually (i.e., enhanced sampling) to determine whether additional hazardous constituents are present in the uppermost aquifer. The Application must state which Appendix IX constituents the Applicant is proposing to sample for the purpose of enhanced sampling in the groundwater.	Section 4.1.2	Section 4.5.1 Table 12 Figure 14	Text addressing these additional sampling requirements has been added to the sampling plan summary in Section 4.5.1 under Analytical Requirements and to Table 12. Figure 14 also has been updated accordingly.

NMED NOD Comment No.	Summary of NOD Comment	Section/Pages(s) in June 2007 Application	Section/Page(s) in Revised Application	Nature of Response and Revision to Application
29.	The Application must state that if the Appendix IX constituents are identified in groundwater that are not already identified in the Permit as hazardous constituents, the Applicant may resample within one month and repeat the Appendix IX analysis. If the second analysis confirms the presence of any new constituents the Applicant must report the concentration of these constituents to NMED within seven (7) calendar days after the completion of the second analysis and add them to the monitoring list. If the Applicant chooses not to resample, then they must report the concentrations of the new constituents to NMED within seven calendar days after completion of the initial analysis and add them to the monitoring list.	Section 4.1.2	Section 4.5.1	PNM agrees to resample for, and add to the constituent monitoring list, any Appendix IX constituents that are detected in groundwater above the relevant standards (the more stringent of maximum contaminant levels under the Safe Water Drinking Act or New Mexico Water Quality Control Commission standards). Text addressing this comment has been added to the sampling plan summary in Section 4.5.1 under Analytical Requirements.
30.	Extraction wells PSMW-25, PSMW-26 and EW-5 may be eliminated from the recovery system as proposed. The Application must state that a work plan to plug and abandon these wells will be submitted to NMED.	Section 4.1.4	Section 4.1.4	Text has been added to Section 4.1.4 to indicate that a Work Plan for plugging and abandoning extraction wells PSMW-25, PSMW-26 and EW-5 will be submitted to NMED for approval.
31.	If any monitoring well is to be decommissioned during the term of the Post-Closure Care Permit, the Application must state that it will be replaced with an equivalent well approved by the NMED within 60 days of the date the well is taken out of service. Prior to decommissioning a well, the Applicant will notify NMED in writing of the rationale for such a decision.	Section 4.1.4	Section 4.1.4	Text has been added to Section 4.1.4 to indicate that if any monitoring well is to be decommissioned during the term of the Post-Closure Care Permit, the monitoring well will be replaced with an equivalent well approved by the NMED within 60 days of the date the well is taken out of service. PNM will notify NMED in writing of the rationale for decommissioning prior to doing so.

NMED NOD Comment No.	Summary of NOD Comment	Section/Pages(s) in June 2007 Application	Section/Page(s) in Revised Application	Nature of Response and Revision to Application
32.	Revise Tables 8 and 9 summarizing the sampling and water level measurement requirements for the groundwater monitor wells proposed by the Applicant and the additional groundwater monitoring wells required by the NMED for Post-Closure Care, as listed on Table 2 of this NOD.	Tables 8 and 9	Table 12 Table 13 Figure 14 Section 4.4.1 Section 4.4.2	Tables 12 and 13, Figure 14, and applicable text have been revised to reflect the sampling requirements listed in this comment and Table 2 of this NOD [Tables 8 and 9 summarize existing sampling requirements and Tables 12 and 13 summarize proposed sampling requirements].
33.	Add information on wells PSMW-11, PSMW- 20, PSMW24C-500, PSMW27C-500, PSMW27C-600 and PSMW-37 to Appendix C detailing well completion and construction diagrams for wells used in the monitoring network.	Appendix C	Appendix C	Well completion and construction diagrams for PSMW-11, PSMW- 20, PSMW24C-500, PSMW27C-500, PSMW27C-600 and PSMW-37 have been added to Appendix C.
34.	To monitor the concentration of groundwater contamination present in the deep aquifer, the following deeper groundwater monitor wells must be included in the groundwater sampling network for the site: PSMW-24C-500; PSMW-27C-500; and PSMW-27C-600.	Section 4.3.2	Table 12 Table 13 Figure 14 Section 4.3.2 Section 4.4.1 Section 4.4.2	Wells PSMW-24C-500; PSMW-27C-500; and PSMW-27C-600 have been added to the deeper groundwater sampling network.
35.	The Application must state that additional deeper groundwater monitoring wells will be added back into the sampling program should sampling and analysis results indicate an increase in the concentration of hazardous constituents in the deep aquifer.	Section 4.3.2	Section 4.3.2	Text has been added to Section 4.3.2 to indicate that PNM will obtain approval from NMED for the addition of deeper groundwater monitoring wells back into the monitoring network should groundwater analytical results indicate an increase in the concentrations of hazardous constituents, as defined by concentrations of the three hazardous constituents for the site (PCE, 1,1,1-TCA, and 1,1-DCE) that exceed the relevant standards (the more stringent of maximum contaminant levels under the Safe Water Drinking Act or New Mexico Water Quality Control Commission standards), in the deep aquifer.
36.	The Application must include a description of how all the deeper groundwater monitoring wells will be maintained. All deeper groundwater monitor wells must be	Section 4.3.2	Section 2.3 Section 4.3.2	Text has been added to Section 2.3 to indicate that well inspections include all monitoring and extraction wells that have not received NMED approval for abandonment and plugging. Text has

NMED NOD Comment No.	Summary of NOD Comment	Section/Pages(s) in June 2007 Application	Section/Page(s) in Revised Application	Nature of Response and Revision to Application
	included in the semi-annual inspection schedule for the Facility.			been added to Section 4.3.2 to address the inspection, maintenance and repair (if needed) requirements of this comment.
37.	The Application must state that operation of the Groundwater Treatment System (GWTS) for shallow groundwater will continue until compliance with cleanup standards is attained for all monitor wells at the site for a period of at least three (3) years.	Section 4.4	Section 4.4	Text in Section 4.4, last paragraph, Bullet 1 has been modified to state that "continued operation of the GWTS for shallow groundwater will continue until compliance with cleanup levels, the more stringent of maximum contaminant levels under the Safe Water Drinking Act or New Mexico Water Quality Control Commission standards for the three hazardous constituents for the site (PCE, 1,1,1-TCA, and 1,1-DCE), is attained for all monitor wells at the site for a period of three consecutive years". Note: PNM is assuming that the words "at least" in the comment refer to the fact that some individual monitoring wells will have reached 3 years of compliance with cleanup levels prior to the entire network obtaining 3 years of compliance and thus, is not directly relevant to how compliance for the entire site will be measured and the shutdown of the GWTS determined.
38.	The Application must state that semi-annual sampling and groundwater level measurements of all four shallow monitor wells and five extraction wells proposed by the Applicant and the annual sampling and semi-annual groundwater level measurements of seven additional shallow monitor wells required by NMED shall continue in accordance with the requirements of the Post-Closure Care Permit and scheduling on Table 3 of this NOD.	Section 4.4	Table 12 Table 13 Figure 14 Section 4.3.2 Section 4.4.1 Section 4.4.2	Tables 12 and 13, Figure 14, and the text in Sections 4.3.2, 4.4.1, and 4.4.2 have been updated to reflect these additions. See also response to Comment 34.

NMED NOD Comment No.	Summary of NOD Comment	Section/Pages(s) in June 2007 Application	Section/Page(s) in Revised Application	Nature of Response and Revision to Application
39.	The Application must state that once all wells have achieved three years of compliance, a phased shutdown of the GWTS will be initiated, which will entail an initial shutdown of the GWTS for a period of one year. If the concentration of constituents of concern increases above the concentration limits in any wells, the GWTS will be operated for additional six month periods of alternating shutdown and operation for a total of three years. This three year period will include semi-annual groundwater sampling and water level measurement at all monitoring wells in the sampling plan. The Application must address how the Applicant proposes to proceed if the concentrations of constituents of concern are above the concentration limits after the three year period of the shutdown of the GWTS.	Section 4.4	Section 4.4.2	The process of phased shutdown outlined by NMED in this comment is reflected accurately in Bullets 1, 2, and 3 of Section 4.4.2. The text in Bullet 3 indicates that PNM may elect to prepare a technical infeasibility demonstration or propose monitored natural attenuation if the concentrations of constituents of concern are above the cleanup levels after the three-year period of phased shutdown of the GWTS. A request to prepare a technical infeasibility study or proposal for monitored natural attenuation will be submitted as a Work Plan to NMED prior to initiation of either option.
40.	NMED approves using monitoring well PSMW-01R as a point of compliance well. The Application must state that all groundwater monitoring wells shall be treated as compliance wells and groundwater shall attain the approved cleanup levels before ending corrective action.	Section 4.4.1	Section 4.4.1	Text in Section 4.4.1 has been clarified to reflect this definition of compliance wells for the Person Generating Station

NMED NOD Comment No.	Summary of NOD Comment	Section/Pages(s) in June 2007 Application	Section/Page(s) in Revised Application	Nature of Response and Revision to Application
41.	NMED approves eliminating the following shallow monitor wells from further sampling and groundwater level measurement: PSMW-01B; PSMW-02; PSMW-03; PSMW-03B; PSMW- 04; PSMW-06R; PSMW-08B; PSMW-09; PSMW-13B; PSMW-14; PSMW-19; PSMW-19X; PSMW-21; PSMW-23; PSMW-25; PSMW-26; PSMW-28; PSMW-29; PSMW-30; PSMW-31; PSMW-32; PSMW-33; PSMW-34; PSMW-35; and, PSMW-36. The Application must state that some or all of these shallow groundwater monitoring wells may be added back into the sampling program should sampling and analysis results indicate an increase in concentration of hazardous constituents in the shallow aquifer. Thus, these wells must be maintained.	Section 4.4.1	Section 2.3 Section 4.4.1	Text has been added to Section 2.3 to indicate that well inspections include all monitoring and extraction wells that have not received NMED approval for abandonment and plugging. PNM intends to apply for approval from NMED to plug and abandon wells from the former monitoring network that are no longer required to be sampled in a phased approach and over several years. Text has also been added to Section 4.4.1 to address the inspection and maintenance requirements of this comment for the monitoring wells that will be removed from current sampling requirements. See also response to Comment 36.
42.	Pursuant to 40 CFR §264.97, the groundwater monitoring system must consist of a sufficient number of wells to yield groundwater samples from the uppermost aquifer that represent the quality of background water at the Facility and that pass the point of compliance and allow for the detection of contamination when hazardous constituents have migrated from the Regulated Unit to the uppermost aquifer. The Application must state this requirement.	Section 4.4.1	Section 4.4.1	Text has been added to Section 4.4.1 to state the requirement of 40 CFR §264.97 as provided in this comment.

NMED NOD Comment No.	Summary of NOD Comment	Section/Pages(s) in June 2007 Application	Section/Page(s) in Revised Application	Nature of Response and Revision to Application
43.	In addition to the four shallow (PSMW-0lR, PSMW-08A, PSMW-10 and PSMW-13A) groundwater monitoring wells and five extraction (VEW, EW-1, EW-2, EW-3, and EW-4) wells proposed by the Applicant for further semi-annual groundwater level measurement, and sampling and analysis using EPA Method 8260 (Table 1 of this NOD), NMED requires that groundwater at seven additional shallow monitoring wells (PSMW-11; PSMW-17; PSMW-18; PSMW-20; PSMW-22; PSMW-27; and PSMW-37) be sampled and analyzed on an annual basis. All 11 shallow and three deep groundwater monitoring wells and five extraction wells shall have the groundwater level measured on a semi-annual basis and the data used to prepare water level contour maps showing the direction and gradient of groundwater flow. The Post-Closure Care Permit Application must be revised to include the additional monitor wells required by NMED as noted on Table 2 of this NOD.	Section 4.4.1	Table 12 Table 13 Figure 14 Section 4.3.2 Section 4.4.1 Section 4.4.2	Tables 12 and 13, Figure 14, and the text in Sections 4.3.2, 4.4.1, and 4.4.2 have been updated to reflect these additions. See also responses to Comments 34 and 38.
44.	The Applicant may request that the required water quality sampling frequency for any monitor well that has been in compliance with the cleanup levels specified in Table 1 of this NOD for three consecutive years be reduced to once a year. A written request for a Permit Modification must be provided to NMED for approval before the monitoring frequency is reduced.	Section 4.4.1	Section 4.4.1	Text allowing for this provision has been added to Section 4.4.1.

NMED NOD Comment No.	Summary of NOD Comment	Section/Pages(s) in June 2007 Application	Section/Page(s) in Revised Application	Nature of Response and Revision to Application
45.	As indicated in Comment 40 above, a phased shutdown of the GWTS may be initiated after all groundwater monitoring wells have attained three years of compliance meeting the groundwater protection standard as described in the Application. The Application must state that the Applicant will submit a work plan to NMED for approval to perform the phased shutdown of the GWTS prior to its initiation.	Section 4.4.2	Section 4.4.2	Text has been added to Section 4.4.2 Bullet 2 to indicate that PNM will submit a Work Plan for the phased shutdown of the GWTS for NMED approval prior to the initiation of the shutdown.
46.	The Application must state that following the initiation of GWTS shutdown, the Applicant will sample and show compliance for three years through semi-annual sampling to demonstrate attainment of the groundwater cleanup levels.	Section 4.4.2	Section 4.4.2	This comment requesting 3 years of sampling after the phased shutdown of the GWTS appears to be in conflict with the shutdown and sampling process outlined in Section 4.4 and approved in Comments 37 and 39—requiring first there be 3 years of compliance for all wells prior to GWTS shutdown and then 3 years of GWTS shutdown and startup if rebound occurs. The phased shutdown process is designed to ensure that 3 years of compliance is met in all wells and that no rebound will occur.
47.	If, after the GWTS shutdown period is initiated, if any monitoring well does not achieve compliance with the groundwater protection standard, the Applicant may apply to NMED for a Permit Modification to demonstrate technical infeasibility to achieve cleanup levels in accordance with 20.6.2.4103.E(1) NMAC. The technical infeasibility demonstration may include a substitute abatement standard(s) for the contaminant(s) that is (are) technically infeasible to clean up.	Section 4.4.2	n/a	Comment noted.

NMED NOD Comment No.	Summary of NOD Comment	Section/Pages(s) in June 2007 Application	Section/Page(s) in Revised Application	Nature of Response and Revision to Application
48.	After initiating GWTS shutdown, the Applicant must maintain the GWTS in operational readiness until corrective action is complete. The Application must include a plan that includes a description of how the GWTS will be maintained. The Applicant must conduct standby readiness demonstrations on a semi-annual basis, consisting of successfully operating the GWTS for three consecutive calendar days. The standby readiness demonstration must not be conducted within seven calendar days of any groundwater sampling event.	Section 4.4.2	Section 4.4.2	Text has been added to Section 4.4.2 to indicate that during GWTS shutdown, standby readiness consisting of successful operation of the GWTS for three consecutive calendar days will be demonstrated semiannually; the standby readiness demonstration will not be conducted within seven calendar days of any groundwater sampling or gauging event.
49.	The Application must state that the Applicant may propose monitored natural attenuation to attain groundwater cleanup levels. If so, the Applicant must submit to NMED a Permit Modification to change the corrective measure at the Facility to monitored natural attenuation.	Section 4.4.2	Section 4.4.2	Text has been added to Section 4.4.2 Bullet 3 to indicate that if monitored natural attenuation is an option proposed for the Person Generating Station, then PNM will submit a Permit Modification to change the Corrective Action from active groundwater cleanup to monitored natural attenuation.
50.	The Application must state that the laboratory analytical results from the monthly sample collection of the influent and effluent water from the GWTS and water from the two irrigation lagoons required under the groundwater discharge permit (DP- 1006) will be included in the semi-annual reports.	Section 4.4.3	n/a	Laboratory results from the monthly sampling of influent, effluent, and irrigation lagoons are provided to the NMED semiannually under a separate permit with NMED's Ground Water Protection and Remediation Bureau and should not be subject to dual permitting and reporting requirements. PNM will forward to the Hazardous Waste Bureau a copy of the semiannual report provided to the Ground Water Protection and Remediation Bureau.

NMED NOD Comment No.	Summary of NOD Comment	Section/Pages(s) in June 2007 Application	Section/Page(s) in Revised Application	Nature of Response and Revision to Application
51.	The Application must state that the GWTS may be shut down for scheduled maintenance or repair for emergencies, and that the Applicant will notify NMED if the GWTS is not to operate for more than seven calendar days. The Application must state that the Applicant shall provide in the operating record and the next semi- annual report information on repairs performed, the reasons for those repairs, and the aquifer response as determined by the water-level data for periods when the system does not operate for more than seven calendar days.	Section 4.4.4	Section 4.4.4	Text has been added to Section 4.4.4 to address this comment. However, PNM requests additional clarification from NMED on how "aquifer response" is to be defined and by what specific parameters it is to be measured.
52.	As proposed in the Post-Closure Care Permit Application PNM shall implement two voluntary groundwater use restrictions on PNM property:			
52(a).	The first restriction which prevents the development of any new production wells on PNM property within 1,000 feet of the shallow groundwater plume that are screened within the upper 100 feet of the saturated zone will be enforced until the concentrations of hazardous constituents at all monitoring wells have been reduced to levels that would not pose an unacceptable risk to human health or the environment.	Section 4.4.6, Bullet 1	Section 4.4.6, Bullet 1	Text in Section 4.4.6, Bullet 1 has been revised to indicate that any new production wells on PNM property within 1,000 feet of the shallow groundwater plume will be designed and installed such that the screened interval is completed in a zone that is not impacted by groundwater contamination. This approach is consistent with the most recent production well installed at the site, which was within the plume boundary and with the approval of NMED Groundwater Quality Bureau and the Hazardous Waste Bureau had a screened interval in a zone not impacted by contamination.
52(b).	The second restriction which prevents the development of any new production well on PNM property within 200 feet of the shallow groundwater plume regardless of the screened interval will be enforced until the mean concentrations of hazardous constituents at all monitoring wells have been reduced to meet drinking water	Section 4.4.6, Bullet 2	Section 4.4.6, Bullet 2	Text in Section 4.4.6, Bullet 2 has been revised to indicate that any new production wells on PNM property within 200 feet of the shallow groundwater plume will be designed and installed such that the screened interval is completed in a zone that is not impacted by groundwater contamination. This approach is consistent with the most recent production well installed at the site, which was

NMED NOD Comment No.	Summary of NOD Comment	Section/Pages(s) in June 2007 Application	Section/Page(s) in Revised Application	Nature of Response and Revision to Application
	standards.			within the plume boundary and with the approval of NMED Groundwater Quality Bureau and the Hazardous Waste Bureau had a screened interval in a zone not impacted by contamination. PNM recommends that the current language regarding regulatory standards be retained because the groundwater cleanup levels are the most restrictive of the drinking water and groundwater standards. However, the sentence referencing Title 20 has been deleted as this regulation has been remanded.
53.	The Application must state that restrictions will be noted on the property plat for Persons Generating Station and filed with the Bernalillo County Zoning Division or its successor agencies. A copy of the revised plat with the restrictions noted on it will be submitted to NMED.	Section 4.4.6	Section 4.4.6	Text in Section 4.4.6 has been revised per this comment.
54.	The proposal in the Application to collect field measurements of pH and specific conductance during purging prior to sampling from low yield wells is acceptable; however, the Application must state that measurements of temperature and turbidity will also be obtained. Field measurements including the volume of water purged, whether or not the well purged dry and the depth that the sampling pump, if used, was placed during sampling and purging must be included in the semi-annual Progress Reports. Low yield wells which will be purged dry prior to sampling must have field measurements taken prior to and after purging.	Section 4.5.1	Section 4.5.1	Text in Section 4.5.1 has been revised to reflect this additional sampling of temperature, volume of water purged, whether or not the well purged dry, and the depth that the sampling pump, if used, was placed during sampling and purging; low yield wells which will be purged dry prior to sampling will have field measurements taken prior to and after purging. These field measurements will be included in the annual report that summarizes semiannual sampling results. The measurement of turbidity during well purging at this site does not yield useful data in this application, which is the measurement of compliance with groundwater standards for organic, hazardous constituents. See also response to Comment I-16.
55.	The Application must state that groundwater level measurements will be performed on all	Section 4.5.2	Table 13 Section 4.5.2	Text in Section 4.5.2 has been revised to clarify that water gauging will be conducted semiannually (and

NMED NOD Comment No.	Summary of NOD Comment	Section/Pages(s) in June 2007 Application	Section/Page(s) in Revised Application	Nature of Response and Revision to Application
	wells listed in Table 2 of this NOD on a semi-annual basis. Such measurements must be obtained within 24 hours prior to purging or sampling a well or at least 48 hours after the well has been purged or sampled. Recovery rates for monitor wells that purge dry must be documented in the semi-annual Progress Report.			reported annually), as listed in revised Table 13 and that water level measurements will be obtained within 24 hours prior to the purging or sampling of a well or at least 48 hours after the well has been purged or sampled.

PERSON GENERATING STATION MAY 2009
POST-CLOSURE CARE PERMIT APPLICATION - CHANGED SECTIONS

Document Section	Changes Based on NOD?	Notes on Changes
Main Text	yes	various text changes (provided in redline/strikeout)
Figure 5	yes	emergency equipment location updates
Figure 14	yes	approved monitoring well network
all other Figures	no	n/a
Table 1	yes	regulatory listing updates (provided in redline/strikeout)
Table 12	yes	current and approved sampling (provided in redline/strikeout)
Table 13	yes	approved key well network (provided in redline/strikeout)
Table 14	yes	new table of inspection types and frequencies
all other Tables	no	n/a
Attachment 1	no	n/a
Attachment 2	yes	2009 post-closure care cost estimate
Attachment 3	yes	2009 financial assurance
Attachment 4	no	n/a
Appendix A	no	n/a
Appendix B	no	n/a
Appendix C	yes	well completion diagrams for additional monitoring network wells
		PSMW-11
		PSMW-20
		PSMW-37
		PSMW-24C-500
		PSMW-27C-500
		PSMW-27C-600
Appendix D	yes	edits to 2000 operating permit (provided in redline/strikeout)
Appendix E	no	n/a

highlighting = changes provided as hardcopy
all Application files provided on CD

RCRA PART B POST-CLOSURE CARE PERMIT APPLICATION
Person Generating Station

May 2009~~June 2007~~

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Acronyms and Abbreviations

bgs	below ground surface
CAD	Corrective Action Directive
CAP	Corrective Action Plan
CFR	Code of Federal Regulations
CMP	Corrective Measures Plan
COC	chain-of-custody
COPC	chemical of potential concern
1,1-DCE	1,1-dichloroethene
DNAPL	dense non-aqueous phase liquid
EPA	United States Environmental Protection Agency
ft	foot (feet)
gpm	gallon(s) per minute
GWTS	groundwater treatment system
HWMR	Hazardous Waste Management Regulations
lb/hr	pound(s) per hour
MCL	maximum contaminant level
METRIC	METRIC Corporation
MW	megawatt(s)
µg/kg	microgram(s) per kilogram
µg/L	microgram(s) per liter
µmhos	micromho(s)
mi	mile(s)
mg/kg	milligram(s) per kilogram
mg/m^3	milligram(s) per cubic meter
NFA	no further action
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NMWQCC	New Mexico Water Quality Control Commission
O&M	operations and maintenance
PCE	tetrachloroethene
PID	photoionization detector
PNM	Public Service Company of New Mexico Resources
ppmv	part(s) per million by volume
QA/QC	Quality Assessment/Quality Control
RCRA	Resource Conservation and Recovery Act
SSL	soil screening level
SVE	soil vapor extraction
SWMU	solid waste management unit
1,1,1-TCA	1,1,1-trichloroethane
UCL	upper confidence level
VMP	vapor monitoring point
VOC	volatile organic compound

Executive Summary

Public Service Company of New Mexico Resources (PNM) has prepared this post-closure care permit application for ongoing corrective action activities to address groundwater contamination from historical operations at Person Generating Station, located in Albuquerque, New Mexico. An open-bottomed metal pipe (the "Unlined Well") was used as a repository for wastes generated during equipment cleaning from 1976 to 1983. The Unlined Well was the likely source of soil and groundwater contamination at the site. The principal historical site contaminants are tetrachloroethene, 1,1-dichloroethene, and 1,1,1-trichloroethane.

The purpose of this post-closure care permit application is to remove corrective action/post-closure care requirements at the Unlined Well (the original source of groundwater contamination at the site), to modify the recovery well network, to decrease the number of wells that are sampled and gauged as part of the groundwater corrective action/post-closure care plan, and to better define the path to site closure. All proposed changes are a result of the substantial remediation progress that has been achieved at the site and incorporates changes due to comments provided by the New Mexico Environment Department on February 10, 2009 (NMED, 2009). The new sampling requirements are summarized in Table ES-1.

This post-closure care permit application was prepared in accordance with the requirements of Code of Federal Regulations Title 40, Parts 260 to 266, Part 268, and Part 270; the New Mexico Hazardous Waste Act; and New Mexico Hazardous Waste Management Regulations, all of which are adopted, with few exceptions, in 20.4.1.900 New Mexico Administrative Code.

Table ES-1
Key Well Network
Person Generating Station

Well ID	Semiannual Sampling Prior to GWTS Shutdown	Semiannual Sampling During GWTS Shutdown	Reason for Selection as Key Well
PSMW-01R[a,b]	X	X	Point of compliance well
PSMW-07R[c]	X	X	Background well
PSMW-08A[a,b]	X	X	Plume center well
PSMW-10[a,b]	X	X	Plume center well
PSMW-11	X[d]	X	Requested by NMED
PSMW-13A[a,b]	X	X	Plume center well
PSMW-17		X	Southern plume boundary well
PSMW-18		X	Northern plume boundary well
PSMW-20	X[d]	X	Requested by NMED
PSMW-22		X	Plume center well
PSMW-27		X	Downgradient plume boundary well
PSMW-37	X[d]	X	Requested by NMED
VEW (Extraction well)	X	X	Extraction well
EW-1 (Extraction well)	X	X	Extraction well
EW-2 (Extraction well)	X	X	Extraction well
EW-3 (Extraction well)	X	X	Extraction well
EW-4 (Extraction well)	X	X	Extraction well
PSMW-24C-500	X[d]	X	Requested by NMED
PSMW-27C-500	X[d]	X	Requested by NMED
PSMW-27C-600	X[d]	X	Requested by NMED

[a]As of the date of this permit application, this well has not met three years of compliance.

[b]Will be sampled annually for Appendix IX constituents.

[c]Monitoring well PSMW-07R is a background well that will be sampled annually for Appendix IX constituents.

[d]Annual sampling.

GWTS = Groundwater treatment system.

ID = Identification.

1.0 Introduction

Public Service Company of New Mexico Resources (PNM) is submitting this Resource Conservation and Recovery Act (RCRA) Part B post-closure care permit application to update the existing post-closure care permit for Person Generating Station (United States Environmental Protection Agency [EPA] Permit Number NMT-360010342) dated August 17, 2000 (NMED, 2000). The proposed changes to the existing post-closure care permit reflect the remediation progress that has been achieved for site soil and groundwater. The principal site contaminants are tetrachloroethene (PCE), 1,1-dichloroethene (1,1-DCE), and 1,1,1-trichloroethane (1,1,1-TCA). The RCRA Part A (Hazardous Waste Permit Application) is provided as Attachment 1.

All RCRA-regulated units at the site ceased operating in 1988. A post-closure care permit was initially issued for the Person Generating Station on September 1, 1988 to establish monitoring and possible corrective action activities necessary for PNM to "clean close" areas of the site, such as soil and groundwater, that were affected by historical operations at the facility. The post-closure care permit was modified in 1991 based on a Corrective Action Directive (CAD) issued by the New Mexico Environment Department (NMED) in September 1991. A renewed permit application was requested by PNM in 2000, resulting in the current post-closure care permit (issued by NMED on August 17, 2000), scheduled to expire on August 17, 2010. A Class III Permit Modification to the 2000 post-closure care permit was issued by NMED in March 2003, which resulted in the removal of four solid waste management units (SWMUs) from the permit (NMED, 2003).

PNM has prepared this post-closure care permit application to remove corrective action/post-closure care requirements at the Unlined Well, to modify the groundwater recovery well network, to decrease the number of wells that are sampled and gauged as part of the groundwater corrective action/post-closure care plan, and to better define the path to site closure. These proposed changes are a result of the substantial remediation progress that has been achieved at the site, and are being submitted in the form of an early post-closure care permit application, although the existing permit does not expire until 2010. The elimination of the Unlined Well from the post-closure care permit requirements and a reduction of the groundwater monitoring requirements will reduce PNM's administrative and financial burdens at the site and will allow the area of the Unlined Well to be released for redevelopment.

This post-closure care permit application was prepared in accordance with the requirements of Code of Federal Regulations (CFR) Title 40, Parts 260 to 266, Part 268, and Part 270; the New Mexico Hazardous Waste Act; and New Mexico Hazardous Waste Management Regulations

(HWMR), all of which are adopted, with few exceptions, in 20.4.1.900 New Mexico Administrative Code (NMAC).

No additional hazardous material treatment, storage, or disposal activities are taking place, or are planned to take place, at this facility. If groundwater remediation progress continues to be achieved at the site, PNM may elect to petition the NMED for early termination of the post-closure care permit prior to the 30-year post-closure care period specified in 40 CFR 264.117 (i.e., prior to the year 2018). As part of this goal, PNM will continue to collect relevant site data that can help support a determination from NMED regarding early termination of post-closure care.

1.1 Facility Description and Operational History

This section presents general information describing the Person Generating Station, including a description of the facility location, site topography and hydrology, surface waters and surrounding land use, and operational history. The general facility information provided herein has been tailored for this post-closure care permit application, pursuant to 40 CFR 270.28.

1.1.1 Facility Location

[40 CFR 270.14(b)(1) and (b)(19)(vii), (viii), (x), (xii)]

The Person Generating Station is located on a 22-acre site that is south of the Albuquerque metropolitan area in Bernalillo County, New Mexico (Figure 1). The site is northeast of the intersection of Broadway Boulevard and Rio Bravo Boulevard and is approximately 2 miles (mi) east of the Rio Grande. Figure 2 is an aerial photograph of the site showing on-site buildings, abutting properties, and important features of the site, including the Unlined Well and the groundwater treatment system (GWTS) building.

1.1.2 Site Topography and Hydrology

[40 CFR 270.14(b)(1) and (b)(11)(i), (ii), (iii); 264.18(a), (b)]

The Person Generating Station is located on a terrace along the eastern edge of the Rio Grande Valley. Ground surface elevations within property boundaries range from approximately 5,015 to 5,070 feet (ft) above mean sea level. Surface water in the area consists mainly of the Rio Grande, located approximately two mi from the site and flowing north to south, and the Albuquerque Municipal Arroyo Flood Control Authority South Diversion Channel, an unlined drainage channel located adjacent to the northwest corner of the site that flows only during storm events.

A topographic map of the site and surrounding area, including the 100-year floodplain of the Rio Grande is included as Figure 3. The topography is provided at a scale of 1 inch equals 400 ft and

with elevation contours at 20-ft intervals, sufficient for presenting the generally flat terrain at the site. According to 2003 data from the Federal Emergency Management Agency (FEMA, 2003), the Person Generating Station is not within the designated 100-year floodplain. A portion of the 100-year floodplain abuts the facility to the north, corresponding to a small arroyo that receives intermittent water flow from precipitation events; this arroyo is more than 300 ft from the Unlined Well.

The Rio Grande Basin aquifer lies below Person Generating Station. Depth to groundwater at the site ranges from 120 to 200 ft below ground surface (bgs). Groundwater at the site has been grouped into two categories for the purposes of investigation and corrective action: shallow and deeper groundwater. The shallow portion of the aquifer refers to water from 120 ft bgs, and the deeper portion is 200 to 900 ft below bgs. Historically, contamination has been detected in the shallow and deeper portions of the aquifer, as well as in "B Zone" wells screened in the interval between the two groundwater units (from 120 to 200 ft bgs).

The permeability of the aquifer sediments is significantly greater in the horizontal direction than in the vertical direction; thus, documented contaminant migration has been predominately in the horizontal direction with limited vertical migration under natural aquifer conditions (Parsons Engineering Science, Inc., 1995). Deeper contamination may have resulted from groundwater production wells associated with Person Generating Station. These production wells have now been plugged, eliminating this transport pathway.

The Person Generating Station is not within 200 ft of a fault that has had displacement during the Holocene (METRIC Corporation [METRIC], 1986) and, thus, meets the siting requirements of 40 CFR 264.18.

1.1.3 Surface Waters and Surrounding Land Use

[270.14(b)(19)(iii), (iv), (v)]

Figure 4 presents area land use and zoning around the Person Generating Station, as well as a wind rose for this area of Albuquerque. As seen on the map, current land types and allowable land uses in proximity of the site include surface waters, agricultural, vacant/abandoned, commercial, transportation/utility, and recreation/open space. The BNSF Railroad runs through the right-of-way on the site's western boundary. Interstate 25 and its right-of-way property are located approximately 1,200 ft (0.2 mi) east of the site. The University of New Mexico Championship Golf Course is located east of Interstate 25 approximately 2,100 ft (0.4 mi) to the northeast of, and generally downgradient from, the site. The closest residential development to the site is approximately 1,500 ft (0.3 mi) to the southwest and generally upgradient from the facility. Future development in the area is expected to be similar to the current land use surrounding the site.

1.1.4 Operational History

PNM operated the Person Generating Station from 1952 to 1986. Photographs of the facility and prominent on-site structures taken during a site visit on April 6, 2007 are presented in Appendix A. The power plant contained four oil-fired electric generating units that were built between 1951 and 1957 with the rated capacity of each unit ranging from 18 to 33 megawatts (MW). The generating units operated regularly until 1981, after which intermittent operations occurred from 1982 to 1986. The power generating facilities were deactivated in 1993.

The generating station consisted of several supporting structures including four aboveground 10,000 to 50,000-barrel fuel oil tanks, four cooling towers, a switchyard, and several large-capacity water production wells. Several of the support structures, such as the evaporative cooling towers, have been removed. The switchyard is operational, but is not typically staffed because of its automated control systems. PNM also operates a Power Operations Center within the facility boundary. Access to the operations center is controlled separately from access to the former power plant/structures and is restricted by a series of security fences and locked gates. Present-day activities at the facility (excluding the Power Operations Center) consist of:

- Periodic switchyard maintenance;
- Operation and maintenance of the groundwater remediation system;
- Collection of samples from monitoring wells;
- Activities to monitor and maintain the integrity of the cover of the Unlined Well; and
- Post-closure care plan inspections and other miscellaneous activities conducted at the site.

In July 2000, a single unit, simple-cycle, gas turbine generating unit with a nominal rating of 132 MW was installed and began operating commercially. This generating unit, known as the Delta-Person Generating Station, is owned and operated by Delta-Power, LLC and can be seen on Figure 2.

1.2 Description and History of the Unlined Well Source Area

[40 CFR 270.14(b)(1)]

The facility included a maintenance area to support, among other activities, equipment cleaning efforts. The area included a sump and a 3.5-ft by 10-ft cylindrical open-bottomed metal pipe (referred to in this application as the "Unlined Well") that was installed below-grade in a vertical position. Liquid wastes collected in the sump were piped approximately 9 ft to the metal pipe; the metal pipe did not extend into groundwater. The Unlined Well was used as a repository for

wastes generated during equipment cleaning from 1976 to 1983. The Unlined Well was the likely source of soil and groundwater contamination at the site.

Historical records and interviews of retired personnel indicate that waste oils and greases, kerosene, a water-trisodium phosphate mixture used in steam cleaning, Stoddard® solvent (a petroleum distillate), Dowclene EC® (active ingredients 1,1,1-TCA and PCE), and other solvent mixtures generated during maintenance activities were piped to the Unlined Well for storage (METRIC, 1993). Records suggest that significant use of Dowclene EC® began in 1979. Maintenance personnel noted when the Unlined Well appeared to be full and arranged for various waste oil reclamation contractors to remove the contents and recycle the material at offsite locations. Equipment repainting activities in 1980 generated a new type of liquid effluent, including waste paint, thinners, and turpentine, which were also collected in the Unlined Well.

The Unlined Well was in use from July 1976 to October 13, 1983, when it was discovered that the bottom of the below-grade pipe was open. PNM immediately emptied the pipe and removed it from service. PNM notified the EPA, the New Mexico Environmental Improvement Division (predecessor to the NMED), and the National Response Center of the discovery. The sump, discharge pipe, upper portion of the pipe, and contaminated shallow soils from the bottom of the Unlined Well were removed in 1983 and disposed of as hazardous waste in 1987 (Engineering Science, Inc., 1994).

Preliminary investigations of the nature and extent of soil and groundwater contamination at the Unlined Well began in 1984; investigation results were subsequently used to develop a Closure Plan and the initial post-closure care permit. The Unlined Well was capped in 1987; the final cover consists of two 80-mil high-density polyethylene liners overlain with a 6-inch thick compacted soil layer and a 25-ft by 35-ft, 6-inch thick reinforced concrete slab. Photographs of the site, including the Unlined Well, are included in Appendix A. Section 3.0 provides details on the corrective action activities at the Unlined Well.

1.2.1 Overview of Corrective Action/Post-Closure Activities

Corrective action activities at the site have included site investigations to determine the extent of soil and groundwater contamination, capping of the Unlined Well area, shallow groundwater recovery and treatment, monitored natural attenuation of deeper groundwater, soil vapor extraction, soil sampling, and periodic groundwater monitoring consisting of gauging and sampling of shallow and deeper groundwater at the site. In addition, visual inspection of the closure cap, wells, and gate are conducted on the dates of groundwater monitoring. Additional information on these key elements of the post-closure care activities at the site is provided below.

1.2.1.1 Soil Remediation

Soil remediation consisted of:

- Excavation of soils from the Unlined Well in 1983 (disposal of sixteen 55-gallon drums of material in 1987);
- Capping of the area to preclude infiltration of surface water in 1987 (details in Section 1.2); and
- Soil vapor extraction (SVE) in various phases and operation intervals from 1995-2003.

The basic soil remediation requirements for the Unlined Well are stipulated in Permit Condition IV.A.1 of the 2000 post-closure care permit (NMED, 2000) and are based on the soil corrective action plan (CAP) identified in Volumes 2 and 3 of the 2000 post-closure care permit application:

- Operation and maintenance of a SVE system to remove soil contaminants;
- Remediation of the entire soil column (ground surface to water table) to soil screening levels (SSLs) protective of groundwater; and
- Remediation of surface soils (ground surface to 12 ft bgs) to SSLs protective of human health based on a residential receptor.

The corrective action taken at the Unlined Well, including confirmation that soil remediation has been achieved to meet both protection of groundwater and human health standards, is detailed in Section 3.0.

1.2.1.2 Groundwater Monitoring and Remediation

[40 CFR 264.93; 264.94(a)]

According to conditions stipulated in the 2000 permit, groundwater monitoring and remediation activities at the site have consisted of:

- Extraction and treatment of shallow groundwater from a network of recovery wells, with treatment using air stripping and activated carbon and discharge of treated water to irrigation ponds at the UNM Championship Golf Course. Note that the current configuration of the GWTS does not use air stripping in the process, per changes to the system as approved by the Groundwater Bureau in 2002 (NMED, 2002).
- Periodic groundwater gauging and sampling of numerous shallow and deeper groundwater wells, with laboratory analysis for halogenated organic compounds.
- Monitored natural attenuation of deeper groundwater.

The basic groundwater remediation requirements stipulated in Permit Condition IV.A.2 of the 2000 post-closure care permit (NMED, 2000) are based on the groundwater CAP identified in Volumes 2, 4, and 5 of the 2000 post-closure care permit application. These requirements are listed below.

- Groundwater cleanup levels consist of promulgated water quality standards: EPA maximum contaminant levels (MCLs) under the Safe Drinking Water Act or the New Mexico Water Quality Control Commission (NMWQCC) groundwater protection standards, whichever is lower. For 1,1,1-TCA, the groundwater cleanup level is 60 micrograms per liter (µg/L); for 1,1-DCE, the groundwater cleanup level is 5 µg/L; and for PCE the groundwater cleanup level is 5 µg/L.
- Monitoring and corrective action must continue until all wells at, and downgradient from, the facility's point-of-compliance have attained the final groundwater cleanup levels specified above for a period of three consecutive years. Compliance with groundwater cleanup levels is demonstrated by assessing contaminant concentration on an individual well basis.
- Samples are collected semiannually from the monitored wells for three years, and a trend analysis is completed to statistically verify that concentrations of contaminants in groundwater are not expected to significantly increase after the three-year final monitoring period. The process of selecting the best trend analysis method (e.g., parametric, nonparametric, time series, etc.) is discussed in EPA (1994).
- When three years of semiannual monitoring data indicate that contaminant concentrations have remained at or below groundwater cleanup levels, PNM may petition NMED to approve a determination that corrective actions for groundwater are no longer necessary. As described in Section 1.0, PNM may also petition NMED for early termination of the post-closure care permit, pursuant to 40 CFR 264.117(a)(2)(i).

1.3 Regulatory Framework

1.3.1 Regulatory Timeline

A timeline of key regulatory submittals and documents for Person Generating Station is as follows:

Date	Submittal/Document
September 1, 1988	Initial Post-Closure Care Permit issued by NMED.
September 1991	NMED issued CAD, detailing corrective action plan(s) for soil and groundwater.
June 1993	NMED approved the deep-plume work plan, an addendum to the CAD requirements.
October 1993	PNM requested Class III Permit Modification to replace two groundwater monitoring wells, clarify monitoring requirements, and allow for SVE installation at the Unlined Well.
January 1994	Corrective Measures Plan (CMP) submitted to the NMED, as partial response to the CAD.

Date	Submittal/Document
June 3, 1994	October 1993 Class III Permit Modification request approved by NMED.
January 15, 1995	Groundwater discharge plan approved by NMED Groundwater Quality Board
August 17, 2000	Second Post-Closure Care Permit issued by NMED, incorporating all 5 volumes of the July 2000 permit application.
March 2003	PNM requested Class III Permit Modification to remove 3 SWMUs from the permit: four leach fields, bone yard area, and spin-off filter.
October 2003	March 2003 Class III Permit Modification request approved by NMED.

1.3.2 Regulatory Requirements

The specific regulatory requirements for this post-closure care permit application are listed in Table 1, along with the section in this application where each applicable requirement is addressed.

2.0 General Permit Requirements

[40 CFR 270.28 and applicable 270.14(b) subsections]

The regulatory requirements for post-closure care permits specified in 40 CFR 270.28 are addressed in the following subsections.

2.1 Facility Description

[40 CFR 270.14(b)(1) and (b)(11)]

A complete description of the Person Generating Station is provided in Sections 1.1 and 1.2.

2.2 Security Provisions

[40 CFR 270.14(b)(4); 264.14(b)(2) and (c)]

PNM has operated Person Generating Station since 1952. Because the facility was an electrical generating station that included dangerous electrical and mechanical equipment, on-site security was required to minimize the unauthorized entry of persons or livestock on the 22-acre site. The Person Generating Station is enclosed by an 8-ft-high chain link security fence with barbed-wire outrigging. Gates are locked by mechanical means or by electrical locking mechanisms, except during those periods when maintenance activity is occurring or groundwater monitoring is being conducted. Warning signs stating "Danger – Unauthorized Personnel Keep Out" in both English and Spanish are attached to the fence and are legible from a distance of 25 feet.

An additional gate is located at the western end of the southern fence line, which allows restricted access only to the parking lot serving the active Power Operations Center on the south side of Person Generating Station. Locked gates prevent unauthorized access to Person Generating Station from the Operations Center. Access from the Operations Center to Person Generating Station requires a PNM employee escort.

The GWTS is locked while the facility is unoccupied to prevent unauthorized exposure to potentially hazardous operations. The vaults for the groundwater recovery pumps are designated as confined spaces as defined in OSHA 29 CFR §1910.120. As such, these vaults are secured by padlocks.

Because closure of the Unlined Well has precluded physical contact or disturbance of any waste or residual environmental contamination that may remain in the soil beneath the cover, the described security measures for the facility are believed to be adequate for the Unlined Well.

Various PNM personnel periodically drive through the site, at which time breaches in security can be identified and investigated.

2.3 Inspection Provisions

[40 CFR 270.14(b)(5), 264.15~~(a) and (b)~~]

All~~The~~ groundwater monitoring and extraction wells that have not received NMED approval for abandonment and plugging are inspected semiannually at the time of groundwater monitoring activities for the following:

- Evidence of surface leakage into the well;
- Integrity of concrete apron and well cover; and
- Signs of malfunction, deterioration, or vandalism.

In addition, during monitoring well purging activities, any visual changes in water turbidity or indications of well plugging or blockage are noted. ~~Any damage noted to the monitoring or extraction wells or the associated barriers is repaired as soon as practicable.~~

Inspection of the security fence and its gates also occurs semiannually to assure that they are in good repair and have not been breached in any manner. ~~Any damage noted to the fencing is repaired as soon as practicable.~~

Inspection of the condition of the cap on the Unlined Well will continue until its removal has been approved by the NMED.~~is no longer required, as the corrective action of the soils is complete (Section 3.0).~~

Any damage noted to the monitoring or extraction wells or the associated barriers, fencing, or the cap at the Unlined Well is repaired as soon as practicable, including any imminent or already occurring deterioration or malfunction of equipment or structures.

All inspection records (as summarized in Table 14) become part of a log maintained at the PNM offices in Albuquerque. These records are maintained for a minimum of three years from the date of inspection and include the date and time of the inspection, name of the inspector, notations of observations made, and the date and nature of any repairs or other remedial actions.

Table 14 summarizes the inspections (and their frequency) performed at the Person Generating Station in order to ensure integrity of security provisions and operational status of the GWTS and the monitoring and extraction wells.

2.3.1 NMED Inspection Results

~~Two~~ Three inspections have been conducted at Person Generating Station by the NMED since the issuance of the 2000 permit:

1. A June 2002 inspection that focused on the conditionally exempt generator status of Person Generating Station resulted in no findings.
2. A June 2003 inspection that focused on the 2000 permit resulted in no findings.
3. A September 2008 Corrective Action Compliance Evaluation inspection resulted in a finding of no violations.

2.4 Preparedness and Prevention

[40 CFR 270.14(b)(6) and applicable 264, Subpart C subsections]

2.4.1 Emergency Equipment

[40 CFR 264.32]

The following emergency equipment is available at the building housing the GWTS: system alarm, fire extinguisher (two multi-class A,B,C-rated extinguishers; one adjacent to the motor control center and one within the office area), and two ~~a~~ safety showers equipped with eyewash stations (one in the northeast portion of the building and one outside of the GWTS building on the west side). The location of emergency equipment and evacuation routes at the GWTS facility are shown in Figure 5.

Emergency equipment requirements related to soil remediation activities at the Unlined Well are no longer applicable, as the corrective action of the soils is complete and the SVE system has been removed (Section 3.0).

2.4.2 Testing and Maintenance of Emergency Equipment

[40 CFR 264.33]

The testing and maintenance of the emergency equipment at the GWTS includes ~~monthly~~ semiannual inspections of the system alarm, fire extinguisher, and safety showers.

Testing and maintenance of emergency equipment related to soil remediation activities at the Unlined Well are no longer applicable, as the corrective action of the soils is complete and the SVE system has been removed (Section 3.0).

2.4.3 Access to Communications and Alarm Systems

[40 CFR 264.34]

All personnel involved in post-closure care activities at the GWTS (e.g., sampling activities, inspections, etc.) have access to, and are trained to use, the emergency equipment including the alarm and communication systems (see also Section 2.6). In the event that external emergency assistance is required, personnel have immediate access to both the facility alarm system and external communication via a hard-wired telephone or cell phones. The GWTS system itself is equipped with an automated shutdown and alarm system that, upon emergency shutdown, an alarm is sent via telephone lines to the Reeves Generating Station control room; the control room operators then notify the Reeves Generating Station maintenance supervisor who dispatches trained personnel to inspect the GWTS and restart the system, if needed.

2.4.4 Arrangements with Local Authorities

[40 CFR 264.37]

In the event of any situation or unplanned occurrence requiring assistance of local authorities or emergency responders, appropriate contacts will be made from the list provided below. For emergency situations, telephone or radio contact will be made with the site emergency coordinator or emergency personnel responding to the situation. Because this site is not a regulated unit, nor does it include active hazardous waste operations, specific arrangements with local emergency departments regarding hazardous waste operations is not required. The local and state agencies responsible for responding to general emergencies are listed below.

Contingency Contact	Contact Information~~Phone Number(s)~~
Emergency Coordinators	John Hale (Primary) 505-241-2014 (work) 505-362-1129 (mobile) 505-293-7930 (home) 1617 Sagebrush Trail SE Albuquerque, New Mexico 87123 Rick Threet ~~Jim Farrell~~ 505-241-47234714 (work) 505-269-1562220-9728 (mobile) 505-503-8642865-4737 (home) 425 Camino De La Tierra Corrales, New Mexico 87048
Fire Department	911
Medical Emergency	911
Bernalillo County Sheriff	South Valley Area Command 505-314-0010

Contingency Contact	Contact Information~~Phone Number(s)~~
NM State Police	District Five (Albuquerque) 505-841-9256
Local Hospital	Presbyterian 505-841-1234
Rocky Mountain Poison Center	800-222-1222
Equipment Breakdowns	John Hale (PNM Point of Contact) 505-241-2014 (work) 505-362-1129 (mobile) 505-293-7930 (home)
RCRA Notification	Will Moats (NMED) 505-222-9551

2.4.5 Contingency Plan and Emergency Procedures

Three documents address emergency contingency procedures at the Person Generating Station:

1. The Contingency Plan incorporated into this Post-Closure Care Permit Application;
2. Health and Safety Plan; and
3. The GWTS O&M Manual, which includes system operation contingencies.

Copies of each of these documents are available at the site and at PNM's Albuquerque offices. The Contingency Plan will be reviewed and amended, as necessary (and NMED notified with a letter and relevant page changes), in the event that: the List of Emergency Coordinators or emergency equipment changes; the permit is revised; the plan fails in an emergency; or the facility changes in a way that materially increases the potential for fires, explosions, or hazardous waste or hazardous waste constituents or changes the response necessary in an emergency.

2.4.5.1 Responses to Non-Sudden Hazards and Releases

The Health and Safety Plan prepared for the Person Generating Station includes an emergency response plan detailing action to be taken by site workers if a hazard or sudden release should occur. The Health and Safety Plan is included in site training requirements (Section 2.6) and is mandatory for all on-site workers.

2.4.5.2 Emergency Procedures for Sudden Hazards and Releases

There are no significant hazards or releases of concern for the post-closure care program. The only potential hazard that could occur relating to the GWTS or sampling and gauging activities is the mishandling of the nitrogen gas cylinders used for operating the monitoring well bladder pumps. Standard safety procedures for handling compressed gas (secured tank and proper gas regulator) are followed to prevent any mishap associated with the nitrogen gas cylinders.

The GWTS involves treatment of groundwater contaminated with hazardous chemicals. The GWTS is inspected monthly during sampling activities. In the event of an automated system shutdown, an alarm is tripped at Reeves Generating Station. Reeves Generating Station is staffed with a six-person fire and chemical emergency response team. In the event of a release, Reeves Generating Station personnel will respond to the situation and the appropriate agencies will be notified in accordance with the notification procedures in Section 2.4.4 and PNM's Spill Manual.

2.4.5.3 Fire Prevention

In the event of a fire involving the GWTS, the system will be immediately shut down, if possible. Upon shutdown, personnel will contain and extinguish the fire using a fire extinguisher located in the facility, if within their capacity to do so. If not, personnel will evacuate the facility using the safest evacuation route possible and implement fire response procedures by calling 911 for the Albuquerque Fire Department. Figure 5 shows the GWTS evacuation routes.

Re-start of the GWTS will not occur until damage resulting from the fire is repaired, unless the fire did not adversely affect the safety, operability, and effectiveness of the GWTS.

2.4.5.4 Explosion Prevention

There are no flammable or explosive materials at the GWTS. Therefore, procedures for the prevention of explosions are not included with the Person Generating Station contingency plan.

2.4.5.5 Other Hazards, Adverse Releases, and Mitigation

[40 CFR 270.30(d)]

Accidents that may occur during operation of the GWTS include accidental releases of contaminated groundwater to soils and/or surface water. Accidental releases could result from pipe failure, pump leakage, leakage from valves and fittings, and tank rupture or overfill. In the event of an accidental release of untreated groundwater, the GWTS will be shut down immediately and facility notification procedures will be implemented (Section 2.4.4). Re-start of the GWTS will not occur until the release has been mitigated and system repairs have been made as necessary to prevent a recurrence of the release.

PNM will take all reasonable steps to minimize releases to the environment and will carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment.

2.5 Recordkeeping and Reporting

2.5.1 Operating Record

[40 CFR 264.73]

Copies of the following reports and records (including any amendments, revisions, or modifications to such documents) will be retained as part of the facility's operating record:

1. The operative permit application and NMED permit will be retained at the facility until post-closure care activities are determined complete by the Secretary of the NMED.
   [40 CFR 264.118(a)]

2. All monitoring information, including all calibration and maintenance records and any recordings for continuous monitoring instrumentation will be retained at the PNM offices in Albuquerque for the duration of the post-closure care period and until post-closure care activities are determined complete by the Secretary of the NMED. Monitoring records will include: the date, place, and time of sampling/measurement; name of individual performing the monitoring; dates of analyses performed; name of the laboratory and individuals performing the analyses; analytical procedures and methods used; quality assurance and quality control procedures used; and analytical results.
   [40 CFR 264.74(b); 270.30(j)(2) and (3)]

3. A written record of waste, soil, and/or groundwater analyses, relevant to the post-closure care activities conducted at the facility (e.g., field notebooks, monitoring data, and annual groundwater reports), including all data used to complete this application, will be maintained at the PNM offices in Albuquerque for the duration of the post-closure care period or for three years beyond completion of activities. Field notes will include the items listed in Section 4.6.
   [40 CFR 264.73(b)(6); 264.100(g)]

4. All inspection records, schedules, and results (Section 2.3) will be retained at the PNM offices in Albuquerque for a minimum of three years from the date of inspection. Inspection records will include: the date and time of the inspection; name of the inspector; notations of observations made; and the date and nature of any repairs or other remedial actions taken.
   [40 CFR 264.15(b)(2) and (d); 264.73(b)(5)]

5. A record of the nature and extent of any system repairs or spill response action, including those that require the implementation of the facility's contingency plan, will be documented in the operations and maintenance (O&M) logbook maintained at the facility and will be retained for the duration of the post-closure care period and until post-closure care activities are determined complete by the Secretary of the NMED.
   [40 CFR 264.73(b)(4)]

6. Records documenting the required training will be maintained at the facility and will be retained for the duration of the post-closure care period and until post-closure care

activities are determined complete by the Secretary of the NMED for current employees or for three years from the date an employee last worked at the facility.
[40 CFR 264.16(d)]

7. Post-closure care cost estimates (Section 2.8) will be updated annually and retained at the PNM offices in Albuquerque for the duration of the post-closure care period and until post-closure care activities are determined complete by the Secretary of the NMED.
[40 CFR 264.73(b)(8); 264.144(d)]

2.5.2 24-Hour Reporting

[40 CFR 270.30(1)(6)(i), (ii), (iii)]

PNM will report orally to the Secretary of NMED any noncompliance or incident at the facility that may endanger human health, human safety, or the environment within 24 hours of the time PNM is aware of such an incident, including:

- Releases of any hazardous waste or hazardous constituents that may endanger public drinking water supplies; or
- Releases or discharges of any hazardous waste or hazardous constituents or fires or explosions at the facility that could threaten the environment or human health outside of the facility.

The oral report will include:

- Name, address, and telephone number of the Permittee (PNM) and the facility (Person Generating Station);
- Date, time, and type of incident;
- Name and quantity of materials involved, including an estimate of the quantity and disposition of recovered material resulting from the incident; and
- An assessment of actual or potential hazards to the environment and human health outside of the facility.

PNM will provide a written report to the Secretary of NMED within five calendar days of the time PNM is aware of such an incident, including:

- A description of the noncompliance or incident and its cause;
- The period(s) of noncompliance or incident, including exact date and times, and the anticipated time it is expected to be corrected (if not already done); and
- Steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, incident, or imminent hazard.

2.5.3 Post-Closure Care Plan Changes

[40 CFR 270.42, 264.118(d)]

Changes to the post-closure care plan will follow the notification schedules and procedures outlined in 40 CFR 270.42 and 264.118(d) for Class I, II, or III permit modifications.

2.6 Personnel Training Program Requirements

[40 CFR 264.16]

Personnel training will be conducted to ensure that facility personnel will be able to respond effectively to emergencies by familiarizing them with the Person Generating Station Health and Safety Plan emergency procedures, equipment, and emergency systems, including (where applicable):

- Contingency Plan requirements;
- Procedures for using, inspecting, repairing, and replacing emergency and monitoring equipment;
- Communications or alarm systems;
- Response to fires or explosions; and
- Response to groundwater contamination incidents.

Personnel conducting post-closure care activities will be trained to inspect security measures and the condition of monitoring wells. The PNM training program will be conducted by an individual trained in hazardous waste management procedures, and will include instruction in hazardous waste management procedures (including contingency plan implementation) relevant to their job functions.

Employees will be trained within six months of their employment or assignment. Employees will not work in unsupervised positions until they have completed the required training. Annual refresher training will be provided to all personnel trained in accordance with this section.

A written description of each position and the name of each employee filling the position will be maintained at the facility, in accordance with the recordkeeping procedures described in Section 2.5.1. Job descriptions and training requirements are included in Appendix E.

2.7 Post-Closure Care Plan

All regulated units at Person Generating Station have been closed since 1988. As such, only a post-closure care plan is required. The post-closure care plans for shallow and deeper groundwater are included in Section 4 of this application. No post-closure care activities are

proposed for the Unlined Well because remediation of the soil has achieved relevant and appropriate action levels defined in the 2000 post-closure care permit for Person Generating Station (NMED, 2000), as detailed in Section 3.0.

2.8 Post-Closure Cost Estimate

[40 CFR 270.14(b)(16); 264.144(b), (c), and (d); 264.145]

The post-closure care cost estimate associated with implementation of corrective actions at Person Generating Station is separately revised and submitted to NMED on an annual basis and is adjusted by recalculating the post-closure care cost estimate in current dollars [per 40 CFR 264.144(b)]. The cost estimate for 20092008 has been adjusted accordingly to reflect completion of the corrective actions identified in this post-closure care permit application (i.e., modifications to the groundwater remediation and well sampling and gauging) and is provided in Attachment 2.

2.9 Proof of Insurance and Financial Assurance

[40 CFR 270.14(b)(16), 264.145, 264.147, and 264.151]

The financial assurance instrument for the post-closure care costs is provided in Attachment 3. In addition, PNM carries liability insurance for the Person Generating Station pursuant to the requirements of 40 CFR 264.147 to cover sudden and non-sudden accidental occurrences with coverage limits of $4,000,000 (each occurrence) and $8,000,000 (annual aggregate), respectively.

PNM will submit, along with the annual post-closure care cost estimate, information demonstrating that PNM meets the financial assurance test (after the close of each succeeding fiscal year).

Upon cancellation of the insurance policy by either PNM or the insurer, PNM will deliver written notice of this cancellation to NMED; the cancellation will become effective 60 calendar days after a copy of the written notice is received by NMED.

3.0 Removal of Post-Closure Care of the Unlined Well

This section presents information demonstrating that all corrective action requirements for the Unlined Well have been met, as delineated in the current post-closure care permit (NMED, 2000; Permit Condition IV.A.1). It is PNM's intention to remove the RCRA cap and redevelop the area of the Unlined Well. A Work Plan that addresses removal of the RCRA cap and remaining SVE system components at the Unlined Well will be submitted to NMED for approval. A "corrective action complete/no further action [NFA]" decision by NMED for the Unlined Well will allow for other uses of this area of the facility, and will be addressed in the Work Plan to be submitted to NMED.

3.1 Previous Investigations and Activities

Section 1.2 summarizes historical investigation and remediation activities that have been conducted at the Unlined Well.

3.2 Unlined Well Corrective Action Plan

The 2000 CAP for the Unlined Well detailed the remediation goals for this area of the site and included a specific approach for demonstrating that soil remediation goals have been met. The CAP for the Unlined Well included the following three, general components:

1. Semiannual Inspection Program – inspection and confirmation that the cover integrity is intact; verification that no deterioration of the cover surface, erosion, or subsidence has occurred; and inspection of the security fence and gates for signs of damage or disrepair.

2. Soil Confirmation Sampling – confirmation that soil impacted by historical releases to the Unlined Well has been remediated to concentrations at or below standards determined to be protective of both human health and groundwater.

3. Operations Closeout – provisions for removal of the RCRA cap, SVE system components, and unneeded vapor monitoring wells; and reuse of the Unlined Well area.

The following subsections focus on the soil remediation and confirmation sampling requirements detailed in the CAP.

3.2.1 Soil Action Levels

The following concentrations in surface soils (maximum or 95% upper confidence level [UCL] of the mean, 0-12 ft bgs) at the Unlined Well were determined in the CAP to be sufficient to ensure protection of current and potential future human receptors:

- PCE: 16,000 micrograms per kilogram (µg/kg)
- 1,1-DCE: 180 µg/kg
- 1,1,1-TCA: 1,400,000 µg/kg

The following concentrations in surface and subsurface soils (based on an average concentration, 0-130 ft bgs) at the Unlined Well were determined to be protective of groundwater:

- 1,1-DCE: 60 µg/kg
- 1,1,1-TCA: 2,000 µg/kg
- PCE: 60 µg/kg

Additionally, the following concentrations of 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene (additional soil contaminants analyzed for in soil and pore gas) were determined to be protective of current and future human receptors (no levels protective of groundwater for these analytes are currently available either through EPA Region 6 or NMED):

- 1,2,4-trimethylbenzene: 52,000 µg/kg
- 1,3,5-trimethylbenzene: 21,000 µg/kg

3.2.2 Soil and Pore Gas Confirmation Sampling Design

The following soil sampling and analysis program was implemented in 2003 to confirm that soil cleanup levels have been met for the Unlined Well (per Vol. III, Section 6.3.2 of the 2000 post-closure care permit application; complete details provided in Appendix B of this application):

- Three soil borings within 10 ft of the SVE well were completed to approximately 120 ft bgs (Appendix B, Figures B-1 through B-4).
- Soil samples were collected at nine depths at each location (3, 6, 9, 12, 33, 57, 77, 97, and 117 ft bgs) and analyzed using EPA Method SE5035/SW8260B (low-level volatile organic compounds [VOCs]).
- Surface soil (3, 6, 9, and 12 ft bgs) analytical results were used for comparison to surface soil cleanup levels determined to be protective of human health.
- Five vapor probes (referred to as vapor monitoring points [VMPs]) were installed in each boring at 118, 98, 78, 58, and 38 ft bgs and were analyzed for 1,1-DCE, 1,1,1-TCA, PCE, 1,2,4-trimethylbenzene, and 1,3,5- trimethylbenzene.
- Measured pore gas concentrations in units of milligrams per cubic meter (mg/m^3) were converted to residual soil concentrations in units of µg/kg (as specified in Vol. III, Section 5.3.2 of the 2000 post-closure care permit application; calculations presented in Appendix B of this application).

- Soil sample analytical results from all nine depths and calculated residual soil concentrations based on pore gas analytical results (whichever was greater for a given location and depth) were used for comparison to cleanup levels determined to be protective of groundwater.

- Duplicate soil samples from each depth at each location were collected for field screening of VOCs using a photoionization detector (PID). Results of the VOC field screening were used to determine if additional vapor probes should be installed. The PID reading used as the basis for determining additional VMPs was 10 parts per million by volume (ppmv). All PID readings of the duplicate soil samples were equal to or less than 0.2 ppmv, significantly lower than action level of 10 ppmv for additional VMPs. Thus, no additional vapor probes were required based on the PID field screening.

3.2.3 Soil Sample and Soil Vapor Analytical Results

The analytical results for surface (0-12 ft bgs) and subsurface (33-117 ft bgs) soil samples are presented in Table 2. Detection limits for all analytes ranged from 4.6 to 5.4 µg/kg, one to six orders of magnitude less than soil action levels. Of the 27 samples taken in soil, 26 were non-detect for all analytes; PCE was detected in one sample (11.00 µg/kg at SVP-1-33, 33 ft bgs).

The analytical results for subsurface soil vapor samples are presented in Table 3. The detection limit for all analytes was 0.10 mg/m^3. 1,1-DCE was detected in 7 of 16 samples at concentrations ranging from 0.28 to 2.2 mg/m^3. 1,1,1-TCA was detected in 2 of 16 samples (0.28 and 2.2 mg/m^3). PCE was detected in 15 of 16 samples at concentrations ranging from 0.17 to 4.10 mg/m^3. There were no detections of either 1,2,4-trimethylbenzene or 1,3,5-trimethylbenzene in any of the soil vapor samples.

3.2.4 Comparison of Analytical Results to Action Levels

All of the surface soil samples (0-12 ft bgs) were non-detect for all analytes (Table 2) and the detection limits were well below any of the soil action levels. The CAP committed to comparing action levels for the protection of human health to 95% UCLs of the mean for each of the chemicals of potential concern (COPCs); however, the statistics are not necessary or meaningful for demonstrating that concentrations of VOCs in the soil are below action levels because none of the COPCs were detected above detection limits (i.e., the data set had 100% non-detects).

The creation of the dataset combining soil matrix and soil vapor analytical results involved two steps:

1. Measured soil vapor concentrations in units of mg/m^3 were converted to residual soil concentrations in units of µg/kg (Appendix B provides full details of the conversions); and

2. The larger of the concentration measured in soil samples or the calculated residual soil concentration based on vapor sampling was conservatively chosen as the representative concentration at a given location and depth.

The CAP committed to comparing action levels protective of groundwater to the average of the representative concentrations; however, statistical averages are not meaningful representations of the data because of the high percentage of non-detects in the combined data sets. Rather, the maximum representative concentration is compared to the groundwater protection action level for each COPC (Tables 4, 5, and 6) and summarized below.

- 1,1-DCE (Table 4): 36 of the 42 soil matrix and soil vapor samples were non-detects; the maximum representative concentration of 2.7 µg/kg (based on a detection limit) is less than the groundwater protection action level of 60 µg/kg.
- 1,1,1-TCA (Table 5): 40 of the 42 soil matrix and soil vapor samples were non-detects; the maximum representative concentration of 2.7 µg/kg (based on a detection limit) is less than the groundwater protection action level of 2,000 µg/kg.
- PCE (Table 6): 27 of the 42 soil matrix and soil vapor samples were non-detects; the maximum representative concentration of 11.0 µg/kg (based on residual concentration) is less than the groundwater protection action level of 60 µg/kg.

3.3 NFA Recommendation

The soil matrix and soil vapor sampling results confirm that soil COPC concentrations at the Unlined Well are below action levels deemed protective of both human health and groundwater. The Unlined Well, the original source of soil and groundwater contamination at the site, does not pose a potential threat to human health or the environment. The requirements of the 2000 CAP have been met, and a NFA decision ~~is~~ will be requested for the Unlined Well in the Work Plan to be submitted to NMED.

3.4 Request for Alternate Uses

Given that corrective action is complete at the Unlined Well and NFA is appropriate for this area of the site, PNM will~~is~~ request~~ing~~ the following in a Work Plan to be submitted to NMED:

1. Removal of the Unlined Well from the post-closure care permit for Person Generating Station;
2. Approval to remove the RCRA cap and the SVE well from the site; and
3. That all conditions of the current operating permit related to the Unlined Well are remanded such that this area can be turned to other uses; the proposed land use at the Unlined Well will be specified in the Work Plan.

4.0 Groundwater Post-Closure Care Plan

[40 CFR 264, Subpart F]

This section describes the proposed groundwater post-closure care plan for the site. All groundwater activities are consolidated under this plan, including groundwater recovery and treatment, and groundwater monitoring (sampling and gauging).

The following subsections:

- Review the activities and requirements of the 2000 groundwater CAP and proposed changes;
- Review the conceptual model of groundwater contamination;
- Summarize the progress of shallow and deeper groundwater remediation;
- Review the definition of the point-of-compliance;
- Propose a process for demonstrating attainment of groundwater cleanup levels;
- Propose changes to the shallow groundwater recovery system;
- Propose a revised groundwater well network for extraction, sampling, and gauging; and
- Present protocols for groundwater sampling and gauging and operations and maintenance of the GWTS.

4.1 2000 Permit Groundwater Corrective Action Plan and Proposed Changes

[40 CFR 270.14(b)(13), (c)(5) and (7); 264.100; 264.117(d), and 264.188(b)]

This section summarizes the major elements of the 2000 groundwater CAP and proposed changes, which are discussed in detail in relevant subsections. In this permit application, the CAP will not be referred to as such; rather these major elements will be detailed, along with proposed modifications, in this post-closure care plan.

4.1.1 Relationship to the CAD

The CAD issued by NMED in 1991 provided requirements for both Phase I and Phase II of the CAP. These requirements specified that a proposal for a groundwater pumping and treatment system capable of capturing the plume be provided in a CMP. The CAD also specified the methods for determining the extent of the plume, and specified the contaminant concentrations which had to be met to conclude corrective action for shallow groundwater at the site.

In order to fulfill the requirements of the CAD, PNM installed a groundwater extraction and treatment system at the site to remediate the shallow groundwater. Remediation of potential source contamination found in vadose zone (unsaturated zone) soils was included in the CAP through installation and operation of a SVE system (see Section 3.0).

4.1.2 Groundwater Final Cleanup Levels and Attainment Demonstration

[40 CFR 264.93; 264.94(a)]

EPA recommends (EPA, 2004) that regulators and facilities use the following three threshold criteria as general goals for final cleanup of groundwater:

1. Protect human health and the environment;
2. Achieve media (soil and groundwater) cleanup objectives; and
3. Control the source(s) of release to reduce or eliminate, to the extent practicable, further releases of hazardous waste or hazardous constituents that may pose a threat to human health and the environment.

PNM uses promulgated water quality standards as the final groundwater cleanup levels for the contaminants of concern for Person Generating Station (1,1-DCE, 1,1,1-TCA and PCE). These groundwater cleanup levels are the more stringent of either MCLs under the Safe Drinking Water Act or NMWQCC groundwater standards. The groundwater cleanup levels are 5 µg/L for 1,1-DCE, 60 µg/L for 1,1,1-TCA, and 5 µg/L for PCE (Table 7). No modifications to these cleanup levels are proposed.

Under the 2000 permit and 40 CFR §260.100, monitoring and corrective action must continue until all wells at, and downgradient from, the facility's point of compliance (PSMW-01R) have attained the final cleanup levels specified above for a period of three consecutive years. Compliance with groundwater cleanup levels is demonstrated by assessing contaminant concentration on an individual well basis.

The 2000 permit does not address shutdown of the GWTS and possible rebound of contaminant concentrations above the cleanup levels. While not specifically required by regulations governing groundwater monitoring and remediation, PNM is proposing to monitor "key wells" along the center and edges of the plume for possible rebound after the GWTS has been turned off. Once all wells have met groundwater cleanup standards for three consecutive years, a graduated shutdown process of the GWTS will commence and the key wells will be sampled semiannually to assess their rebound potential. One additional year of compliance will be required for these key wells while the GWTS is off. If concentrations continue to be below cleanup levels, PNM will apply for site closure. PNM is requesting that the compliance period

for Corrective Action activities be extended until groundwater cleanup goals have been met for a period of three years. These proposed changes are discussed further in Section 4.4.2.

4.1.3 Point of Compliance and Monitoring Well Network

The 2000 permit established a single point of compliance and identified plume, sentry, and background wells. Tables 8 and 9 list these wells for shallow and deeper groundwater, respectively. The 2000 permit also stipulated that compliance with cleanup levels must be demonstrated in all groundwater monitoring wells downgradient from the point of compliance. This definition of point of compliance is retained for this permit application.

4.1.4 Groundwater Recovery Well Network and Treatment System

Eight groundwater recovery wells were specified in the 2000 permit. As a result of several site conditions, including a drop in the water table, recovery wells PSMW-25, and PSMW-26 are non-functional. Recovery well EW-5 is no longer functional due to a collapsed well casing. Elimination of these recovery wells ~~is proposed~~ has been approved by NMED (NMED, 2009). To compensate for the loss of these wells, recovery well EW-3 will be operated at a higher flow rate, which was identified as part of a pump test conducted at EW-3 (METRIC, 2005). Due to changes to the GWTS in 2003, an activated carbon system, rather than the air stripper/carbon system used under the 2000 permit, is now used. These changes are described in detail in Sections 4.3.1 and 4.4.3. A Work Plan to plug and abandon PSMW-25, PSMW-26, and EW-5 will be submitted to NMED.

If any monitoring well is to be decommissioned during the term of the Post-Closure Care Permit, the monitoring well will be replaced with an equivalent well approved by the NMED within 60 days of the date the well is taken out of service. PNM will notify NMED in writing of the rationale for decommissioning prior to doing so.

4.2 Conceptual Site Model of Groundwater Contamination

The conceptual site model summarizes the current understanding of how contaminants were released into the subsurface and their subsequent migration to other areas. Several detailed site investigations have been performed at the site since discovery of the release from the Unlined Well in October 1983 (METRIC, 1993; Engineering-Science, Inc., 1994; Parsons Engineering Science, Inc., October 1996). Important aspects of the conceptual model include the location of the contaminant release, contaminant concentrations, and hydrogeological factors including depth to groundwater and groundwater flow rate and direction.

4.2.1 Groundwater Contaminants

[40 CFR 264.93; 264.94(a); 264.100(a)(1),(2)]

The primary groundwater contaminants identified by previous sampling activities at the site are three VOCs: 1,1,1-TCA, PCE, and 1,1-DCE. Secondary contaminants which have not been consistently detected above applicable EPA or the NMWQCC standards include chloroform and 1,1-dichloroethane. As stated in Section 1.2.1.2, groundwater cleanup levels for the primary contaminants are 60 µg/L for 1,1-TCA, 5 µg/L for 1,1-DCE, and 5 µg/L for PCE. These groundwater cleanup levels reflect the more conservative of either the EPA or the NMWQCC standard.

PNM is confident that pure forms of the contaminants, known as dense non-aqueous phase liquids (DNAPL), are not present in soils at the Unlined Well. This position has been supported by historical documents (METRIC, 1993; Parsons Engineering Science, Inc., 1994), and continues to be supported by groundwater and soil data described for closure of the SVE system at the Unlined Well (Section 3.2). Several important observations support this conclusion:

1. Pure PCE or 1,1,1-TCA were never placed in the Unlined Well. The Unlined Well was used to contain wash waters with diluted concentrations of oils and chlorinated solvents.

2. The maximum concentration of PCE in soil directly beneath the Unlined Well (2,127 mg/kg) is much less than would be expected in PCE-saturated soils (>100,000 mg/kg).

3. A maximum concentration of PCE in groundwater (2,741 µg/L) was measured in PSMW-01 in October 1988. Five years later, in August 1993, and prior to any groundwater pumping, the maximum concentration of PCE in PSMW-01 had decreased to 350 µg/L. In October 2006, the concentration at PSMW-01R (a replacement well for PSMW-01) was 5.0 µg/L. This concentration would have remained high if a continual source of DNAPL was present in the source area.

4. Successful SVE operation in the source area removed over 1,400 pounds of VOCs with virtually no rebound of PCE vapors after a 247-day shutdown period of equilibration. This strongly indicates that there are no DNAPL in the soil.

4.2.2 Groundwater Transport

[40 CFR 270.14(b)(19)(ix) and (c)(2),(3); 264.31; 264.97(c)]

Groundwater at the site has two zones: shallow and deeper. The shallow aquifer at the site, located at a depth of approximately 120 ft bgs, is defined as the upper 50 ft of the water bearing zone. This zone is unconfined, and consists of silty sand to gravel. In general, the elevation of the water table surface has dropped approximately 1 ft per year. The groundwater in deeper

zones (200 to 900 ft bgs) is likely to be under confined conditions, and is referred to as the deeper aquifer.

As described in Section 1.2, the source of these contaminants is the Unlined Well. Contaminants released into the Unlined Well migrated approximately 120 ft to shallow groundwater as both a liquid and vapor (METRIC, 1993). Within the shallow aquifer, contaminants were carried by a generally eastward groundwater flow under a groundwater gradient of approximately 0.006 ft/ft (METRIC, 1993), with groundwater flow rates (based on local permeability) ranging between 1 and 2500 ft/year. Figure 6 shows the locations of the shallow and deeper groundwater monitoring well networks according to the 2000 permit. Tables 8 and 9 summarize the sampling and gauging requirements for the shallow and deeper groundwater wells, respectively. Well construction diagrams and well completion information are provided in Appendix C for those wells ~~proposed~~ to be retained in the network. All wells were constructed in accordance with the requirements of 40 CFR 264.97(c).

4.2.3 Potential Receptors

There are no drinking water wells within a 1-mi radius of the site (OSE, 2007). Two irrigation wells are located to the northeast of and generally downgradient from, the Person Generating Station. These wells, located almost 1 mi to the northeast of the site, are used for irrigation at the University of New Mexico Championship Golf Course. These wells draw from the deeper portions of the aquifer and do not appear to influence the direction of deeper groundwater flow (METRIC, 1992).

4.3 Summary of Groundwater Remediation

[40 CFR 270.14(c)(4)]

This section presents a description of the status of the shallow and deeper groundwater remediation, including analysis of the shallow groundwater remediation system, the results of the semiannual sampling events, and progress achieved since groundwater remediation activities began.

4.3.1 Shallow Groundwater Remediation

The shallow GWTS was installed as part of corrective action implementation at Person Generating Station in 1995. Currently, the shallow GWTS uses activated carbon to treat approximately 60 gallons per minute (gpm) of groundwater from five groundwater recovery wells (VEW, EW-1, EW-2, EW-3, and EW-4). Figure 7 presents the process flow diagram for the GWTS. Treated water is discharged to the UNM Championship Golf Course, where it is used for irrigation. Prior to modification of the GWTS in 2002 (NMED, 2002), the primary treatment involved air stripping followed by activated carbon treatment.

In 1993, the total estimated extent of the VOC plume in the shallow aquifer was 36 acres, with dissolved PCE and 1,1-DCE plumes extending to the east approximately 2,400 ft from the Unlined Well. Remediation efforts have substantially reduced the extent of these plumes. Prior to the initiation of groundwater recovery and treatment in 1995, the maximum detected concentrations of contaminants were 10,700 µg/L of 1,1,1-TCA, 1,600 µg/L of 1,1-DCE, and 2,700 µg/L of PCE. Contaminant migration in the shallow groundwater has been predominantly in the horizontal, eastward direction, and there has been limited vertical migration to deeper groundwater zones (Parsons Engineering Science, Inc., 1995). The presence of sporadic, trace (PCE < 5 µ/L and 1,1-DCE < 15 µ/L) concentrations of VOCs in these zones may have been due to Person Generating Station groundwater production wells, which may have provided vertical migration pathways. The production wells were plugged and abandoned in 1993.

Using semiannual sampling data (provided on CD as Attachment 4), historical concentrations of contaminants measured for shallow groundwater monitoring wells are presented in Appendix C as Figures C-1 through C-34. These time-series graphs uniformly indicate substantial reductions in the groundwater concentrations of the primary contaminants and provide a useful summary of remediation achievements. From the graphs it can be seen that the main contaminants are 1,1-DCE and PCE. As shown in the plots, all contaminant concentrations in the monitoring wells (exclusive of PSMW-01/01R, PSMW-08A, PSMW-10, PSMW-13A, and PSMW-24/EW-5) have been below groundwater cleanup levels for at least three consecutive years.

The progress of shallow groundwater remediation at the site can be assessed by analyzing the historical data for PCE, 1,1-DCE, and 1,1,1-TCA. Table 10 presents a comparison of contaminant groundwater concentrations in the shallow wells for two sampling dates: October 1997 and October 2006. As demonstrated by this table, significant progress has been made in reducing contaminant concentrations, with numerous wells now showing concentrations below detection limits (and below applicable groundwater cleanup levels) for these contaminants.

The data from Table 10 are presented in the form of isoconcentration contour plots for the primary contaminants. The 1,1-DCE data for 1997 and 2006 are plotted on Figures 8 and 9, respectively. The PCE data for 1997 and 2006 are plotted on Figures 10 and 11, respectively. These plots also indicate substantial reductions in the shallow groundwater plume size and contaminant concentrations during the period of 1997 to 2006.

The data graphs in Appendix C show historical trends in contaminant concentrations. Of particular interest are the trends of recovery wells VEW (Figure C-35), EW-1 (Figure C-36), EW-4 (Figure C-13), and EW-5 (Figure C-21). Contaminant data from these wells show exponentially decreasing concentrations, characteristic of pump and treat systems when the source of contamination (e.g., the Unlined Well) is removed (1997). Generally decreasing water

levels at the site may also have contributed to a decrease in groundwater contaminant concentrations. Measured concentrations in recovery wells VEW and EW-1 fell below groundwater cleanup levels in 2000, while EW-4 fell below cleanup levels in 2004. Recovery well EW-5 has shown substantial decreases in concentrations, with 1,1-DCE and PCE concentrations falling below 10 µg/L in April 2002, though as of October 2006 PCE concentrations were still slightly above the groundwater cleanup level of 5 µg/L.

In order to address whether the groundwater remediation has reached asymptotic concentrations of contaminants, a point at which further remediation is not effective (Gilbert, 1987), an analysis of monitoring wells located in the center of the plume was performed. Based on the location of the plumes on Figures 8, 9, 10, and 11, monitoring wells PSMW-01R, PSMW-10, and PSMW-22 are located on the central longitudinal plume axis. The statistical significance of the observed time-trends of PCE concentrations were evaluated using the Mann-Kendall test (Appendix C) which is a trend estimator specifically recommended for environmental data (Gilbert, 1987; EPA, 2000). The results show decreasing trends in all three wells. Of these wells, PSMW-01R and PSMW-10 have not attained the groundwater cleanup levels.

4.3.2 Deeper Groundwater Remediation

This section presents a description of the status of the deeper groundwater contaminant plume. The terms "deep" and "deeper" describe the deeper portions (200 to 900 ft bgs) of the aquifer underlying the Person Generating Station. PNM is currently performing monitored natural attenuation in the deeper groundwater as part of the 2000 post-closure care permit due to the low concentrations of contaminants.

Historical data collected from deep well clusters indicate that site-related contaminants were present at depths as deep as 800 feet bgs. Data from October 1997 show low concentrations of PCE and 1,1-DCE detected at 500, 600, and 800 ft bgs. As shown in Table 11, considerable progress has been achieved in reducing contaminant concentrations, with all but three deeper groundwater monitoring wells showing concentrations below detection limits as of October 2006 (and all are below applicable groundwater cleanup levels). Isoconcentration contour plots using data from Table 11 for the primary contaminants are included as Figures 12 (1,1-DCE) and 13 (PCE).

Plots of historical deep groundwater concentration data versus time, presented in Appendix C as Figures C-39 through C-53, provide a useful summary of contamination trends in this groundwater zone. As shown in the plots, all deeper groundwater monitoring wells have been below the groundwater cleanup levels for at least three consecutive years. Therefore, no deeper groundwater wells are proposed for further monitoring. However, wells PSMW-24C-500, PSMW-27C-500, and PSMW-27C-600 have been retained for sampling in the monitoring network to monitor deeper groundwater contamination at the request of NMED (NMED, 2009).

Should groundwater analytical results indicate an increase in the concentrations of hazardous constituents in the deeper aquifer, as defined by concentrations of the three hazardous constituents for the site (PCE, 1,1,1-TCA, and 1,1-DCE) that exceed the relevant standards (the more stringent of maximum contaminant levels under the Safe Water Drinking Act or New Mexico Water Quality Control Commission standards), PNM will obtain approval from NMED for the addition of deeper groundwater monitoring wells back into the monitoring network. Inspection and maintenance of monitoring wells is addressed in Section 2.3.

4.4 Post-Closure Care Plan Groundwater Remediation

[40 CFR 260.100(f); 264.97(d),(e)]

This post-closure care plan for groundwater remediation reflects the substantial remediation of soil and groundwater that has been achieved at the site. Achieving soil cleanup levels at the Unlined Well (Section 3.2) removed the source area for groundwater contamination. Specifically, soil remediation is complete and is no longer included in the CAP (Section 3.0); the CAP addresses only groundwater. Based on the remediation progress to date, the remaining task is to achieve the groundwater cleanup objectives for the site.

To attain the groundwater cleanup objectives, this groundwater post-closure care plan proposes:

- Continued operation of the GWTS for shallow groundwater until compliance with cleanup levels as defined by concentrations of the three hazardous constituents for the site (PCE, 1,1,1-TCA, and 1,1-DCE) that exceed the relevant standards (the more stringent of maximum contaminant levels under the Safe Water Drinking Act or New Mexico Water Quality Control Commission standards), is attained for all monitoring wells at the site ~~downgradient of the compliance well~~ for a period of three consecutive years ~~([~~40 CFR §260.100(f)~~])~~;
- Suspension of semiannual sampling in those wells that have already attained the required three years of compliance (with the exception of wells to continue to be monitored at NMED's request [NMED, 2009]);
- Once all wells have attained three years of compliance, initiating a phased shutdown of the GWTS, which will include sampling of key wells (see Tables 12 and 13); and
- Defining a process and timeframe for a technical feasibility application if a well cannot attain or maintain compliance for the required three years or for a one year period (spanned by two semiannual sampling events) after GWTS shutdown.

4.4.1 Point of Compliance and Downgradient Wells

[40 CFR 270.14(c)(3),(5),(7); 264.95; 264.97; 264.100(a)(3)]

The point of compliance for groundwater is where a facility should monitor groundwater quality and/or achieve specified cleanup levels to meet facility-specific goals (EPA, 2004). The 2000 post-closure care permit specified a single point of compliance (PSMW-01R) [Permit Condition IV.A.2.a.1.(c)], but then stated that downgradient wells should also attain the cleanup levels. At the direction of NMED (NMED, 2009), all groundwater monitoring wells will be treated as compliance wells and groundwater shall attain the approved cleanup levels before ending corrective action. The groundwater monitoring system at the Person Generating Station consists of a sufficient number of wells to yield groundwater samples from the uppermost aquifer that represent the quality of background water at the site and that pass the point of compliance and allow for the detection of contamination when hazardous constituents have migrated to the uppermost aquifer and, thus, meets the requirements of 40 CFR §264.97.~~PNM is proposing that this definition be retained in the renewed post-closure care permit.~~

Currently, PNM is required to sample 38 shallow wells (8 of which are extraction wells) and 15 deeper wells using Method 8021 Halo (Tables 8 and 9). Of these 38 wells, 34 of the shallow and all of the deeper wells have met the 2000 post-closure care permit conditions of three consecutive years below applicable groundwater cleanup levels. Because of the attainment of compliance in many wells, PNM will~~is proposing to~~ conduct semiannual sampling and gauging only at those monitoring wells that have not attained three years of compliance plus six wells that have attained three years of compliance, as requested by NMED (NMED, 2009). Should groundwater analytical results indicate an increase in the concentrations of hazardous constituents in the shallow aquifer, PNM will obtain approval from NMED for the addition of shallow groundwater monitoring wells back into the monitoring network. Inspection and maintenance of monitoring wells is addressed in Section 2.3. Sampling and gauging would also be conducted semiannually at the five remaining functional extraction wells.

As of the date of this application, four monitoring wells have not yet attained three consecutive years of compliance: ~~are~~ PSMW-01R, PSMW-08A, PSMW-10, and PSMW-13A. Per NMED (NMED, 2009), PNM may request that the required water quality sampling frequency for any monitoring well that has been in compliance with the approved cleanup levels for three consecutive years be reduced to once a year. A written request for a Permit Modification will be provided to NMED for approval before the monitoring frequency is reduced for any well.

Once these monitoring wells have attained three years of compliance, a phased shutdown of the GWTS will begin and key wells will be sampled to determine if concentrations of primary contaminants rebound above cleanup levels. Table 12 lists all of the site wells and compares the existing permit monitoring requirements with proposed monitoring. Table 13 lists the

monitoring wells that (as of the date of this application) have not attained three years below cleanup levels and summarizes key wells that will be sampled during the phased GWTS shutdown.

The key wells are:

- PSMW-01R
- PSMW-07R (upgradient background well sampled once per year for Appendix IX constituents only)
- PSMW-08A
- PSMW-10
- PSMW-11
- PSMW-13A
- PSMW-17
- PSMW-18
- PSMW-20
- PSMW-22
- PSMW-27
- PSMW-37
- PSMW-24C-500
- PSMW-27C-500
- PSMW-27C-600
- VEW (Extraction Well)
- EW-1 (Extraction Well)
- EW-2 (Extraction Well)
- EW-3 (Extraction Well)
- EW-4 (Extraction Well)

Figure 14 presents a map of these key wells. Additional details of proposed changes to the shallow groundwater post-closure care plan are provided in Sections 4.4.2 and 4.4.3.

4.4.2 Demonstrating Attainment of Groundwater Cleanup Levels

[40 CFR 264.117; 264.96(c); 264.100(a)(4) and (f)]

To demonstrate attainment of groundwater cleanup levels, groundwater contaminant concentrations in the point of compliance well (PSMW-01R) and downgradient wells must fall below the groundwater cleanup levels and maintain concentrations below those levels for three consecutive years. ~~For this post-closure care permit application,~~ PNM will ~~proposes to~~ continue sampling of the extraction wells,~~only~~ those wells that have not yet attained three consecutive years of compliance at the time of permit issuance (four monitoring wells as of this application date), plus an additional six wells requested by NMED (NMED, 2009). Once all wells meet the three-year requirement, a phased process for shutdown of the GWTS will begin, during which key wells will be monitored to determine if contaminant concentrations rebound above cleanup levels. The proposed process is described below and presented graphically in Figure 15 in the form of a decision flow chart.

The following overall process being proposed as the path to site closure:

1. At the date of permit issuance by NMED, suspension of sampling and gauging in all wells that have already attained the three consecutive years of compliance set forth by the 2000 post-closure care permit.

2. While the GTWS continues to operate, continued semiannual sampling of those wells not meeting the conditions of #1 until three consecutive years (six semiannual sampling events) of compliance have been achieved, including any progress made under the current 2000 permit. As of the date of this permit application, four functional wells have not met this criterion. If any of the remaining wells do not attain compliance within three additional years, PNM may elect to prepare a technical infeasibility demonstration that makes use of EPA guidance to show an asymptotic condition is present and that improvement using groundwater pumping is unlikely. Moreover, with NMED approval of a Work Plan for the phased shutdown, ~~concurrence,~~ PNM may proceed with the phased shutdown of the GWTS to demonstrate that significant rebound above the asymptotic condition at these wells does not occur, and additionally, that other key wells do not rebound above cleanup levels.

3. Following attainment of three years of compliance in all wells, initiate the shutdown of the GWTS, followed by semiannual gauging and sampling of key wells (representative of the former plume) until one additional year (two semiannual sampling events) of compliance under conditions of GWTS shutdown is achieved. The list of key wells is presented in Table 13, along with the rationale for their selection. If concentrations in key wells rebound above cleanup levels, the system will be operated for another six-month period, followed by sampling and GWTS shutdown if concentrations have fallen below cleanup levels. If within three calendar years of the date GWTS shutdown was first initiated a well does not achieve the one additional

year of compliance (two consecutive semiannual sampling events), PNM may elect to prepare a technical infeasibility demonstration or propose monitored natural attenuation. A request to prepare a technical infeasibility study or proposal for monitored natural attenuation will be submitted as a Work Plan to NMED prior to the initiation of either option; the approved Work Plan will be enacted by a Permit Modification that changes the corrective action from active groundwater cleanup to monitored natural attenuation.

During GWTS shutdown, standby readiness consisting of successful operation of the GWTS for three consecutive calendar days will be demonstrated semiannually; the standby readiness demonstration will not be conducted within seven calendar days of any groundwater sampling or gauging event.

4.4.3 Shallow Groundwater Recovery System

[40 CFR 270.14(c)(5) and (7); 264.97(c); 264.100(a)(3) and (d)]

PNM will continue to operate the groundwater recovery and treatment system subject to the provisions of Section 4.4.2, which proposes a phased shutdown of the GWTS following attainment of the compliance conditions, and eventually shutdown of the system if all conditions are met. Changes in the system since the last permit are described below.

Due to continued drop in local groundwater table, recovery wells PSMW-25 and PSMW-26 have not been able to function since April of 2004. In 2003, the average groundwater extraction rates from PSMW-25 and PSMW-26 were 0.15 gpm and 0.25 gpm, respectively. Prior to April 2004, VOC concentrations had been below applicable groundwater cleanup levels in these extraction wells since 1998. These wells will remain off and will not be gauged or sampled.

EW-5 was taken out of service in November 2003 due to a collapsed well casing. A pump test conducted in EW-3 in May 2004 and subsequent data analysis showed that EW-3 operating at an increased pumping rate can contain and remediate the remaining downgradient VOC groundwater plume at the site (METRIC, 2005). Consequently, EW-5 will remain off and will not be gauged or sampled. Groundwater extraction will continue in five recovery wells: VEW, EW-1, EW-2, EW-3, and EW-4. The extraction flow rate in EW-3 will be maintained at a level sufficient to provide capture in downgradient areas, as shown in the 2004 pump test (METRIC, 2005). In 2006, the average groundwater extraction rates (in parentheses) were: VEW (2.2 gpm), EW-1 (1.4 gpm), EW-2 (5 gpm), EW-3 (39 gpm), EW-4 (13.5 gpm), for a total average flow rate of approximately 61 gpm.

Other Permits

Treated groundwater is discharged to two University of New Mexico Championship Golf Course irrigation lagoons under a groundwater discharge permit (DP-1006) from the Ground Water

Protection and Remediation Bureau of the NMED. The permit allows the discharge of up to 144,000 gallons per day of treated groundwater. Cleanup levels for PCE, 1,1-DCE, and 1,1,1-TCA, are 5 µg/L , 5 µg/L, and 60 µg/L, respectively. Monthly sample collection includes: influent; the effluent from the two carbon units; and water from the two irrigation lagoons. All samples are currently analyzed by EPA Method 8021; however, PNM will propose to the Groundwater Protection Bureau that this method be changed to EPA Method 8260. The monthly discharge volume is calculated from totalizer readings. Results are reported to the NMED semiannually.

An air discharge permit was obtained from the City of Albuquerque for the SVE system and two air stripper units. This permit was identified as "1353 Air Stripping/Vapor Extraction and Treatment System". This permit was canceled in October 2006 because of previous removal of the air stripper from the GWTS and the discontinuance/removal of the SVE at the Unlined Well.

4.4.4 Groundwater Treatment System Operations and Maintenance

[40 CFR 270.30(e) and (l)(1),(2)]

PNM will ensure that the GWTS is properly operated and maintained to achieve the objectives of the post-closure care plan. PNM will report to NMED any planned physical alterations or additions to the facility or GWTS, including any alterations that may result in noncompliance. PNM will notify NMED if the GWTS is not to operate for more than seven calendar days for either scheduled or unscheduled maintenance, repairs, or emergencies. The operating record and next annual report will provide information on repairs performed, the reasons for those repairs, and the aquifer response as determined by the water-level data for periods when the system does not operate for more than seven calendar days.

A complete O&M manual for the Person Generating Station (Parsons Engineering Science, Inc., August 1996) was prepared to provide information on the proper operation, maintenance, and monitoring of the shallow GWTS; revision 2 is the current version of the O&M manual used for Person Generating Station (Parsons, 2003). This O&M manual provides a detailed description of the GWTS as well as the startup and shutdown procedures. Other elements of the O&M manual include system maintenance and repairs, a contingency plan, and sampling and analysis requirements.

O&M Procedures and Schedules

All functional checks of the GWTS are performed by personnel from PNM's Reeves Generating Station during periodic visits to the site, or during unscheduled visits needed to re-start the system. Routine monitoring of the GWTS includes daily checks on operating parameters and sampling of water influent, between, and effluent of the GAC units. In general, all system checks and data recording are as described in Parsons, 2003. Weekly flow readings are taken from GWTS

influent, the influent surge tank, the effluent surge tank. This data is then used to calculate flow rates to ensure that the rate is within the recommended flow range for each well. Monthly data are reported to the State Engineer's Office. Pressure readings and pressure drops are also recorded weekly.

Maintenance and Repairs

Routine monitoring of the GWTS provides information needed to schedule preventative maintenance and to detect conditions that require repair or replacement. Maintenance procedures for the strainer, equalization tank, influent tank, pump, bag filter, GAC unit, and effluent surge tank are described fully in the manual.

Treatment System Sampling Procedures

Sampling ports are located throughout the system to allow for collection and analysis of samples to characterize influent and effluent water, and to verify the level of treatment between the GAC units. The objectives of sampling and analysis are to ensure that groundwater cleanup levels are achieved and to provide operational data needed for routine system maintenance.

Specific sampling collection, analysis, evaluation, and documentation procedures presented in the O&M manual were developed in accordance with the Discharge Plan Approval (Appendix C of Parsons, May 2003). Samples will be collected in discrete events to provide a data set representative of actual operating conditions at a particular point in time.

4.4.5 Deeper Groundwater Monitored Natural Attenuation

All deeper groundwater wells have attained three years of compliance (see Section 4.3.2). Accordingly, monitored natural attenuation will not be necessary for these wells, and sampling and gauging of these wells will be suspended.

4.4.6 Voluntary Use Restrictions

[40 CFR 264.117(a)(1)]

To further minimize the potential for adverse health or environmental impacts during corrective actions, PNM proposes to voluntarily implement two specific groundwater use restrictions:

1. The first restriction ~~will prevent~~ relates to the siting of any new production wells within 1,000 ft of the shallow groundwater plume: any such well will be designed and installed such that the screened interval is completed in a zone that is not impacted by groundwater contamination. This approach is consistent with the most recent production well installed at the site, which was within the plume boundary and with the approval of NMED Groundwater Quality Bureau and the Hazardous Waste Bureau, had a screened interval in a zone not impacted by contamination. ~~that are screened within the upper 100 ft of the saturated zone.~~ 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 an unacceptable risk to human health or the environment.~~a significant risk to industrial receptors if extracted groundwater is used for industrial purposes.~~

2. The second restriction ~~will prevent~~ relates to the siting of any new production well within 200 ft of the shallow groundwater plume: any such well will be designed and installed such that the screened interval is completed in a zone that is not impacted by groundwater contamination. This approach is consistent with the most recent production well installed at the site, which was within the plume boundary and with the approval of NMED Groundwater Quality Bureau and the Hazardous Waste Bureau, had a screened interval in a zone not impacted by contamination. ~~, 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 concentrations of all plume wells have~~has~~ been reduced to groundwater cleanup levels.

These groundwater well restrictions will not apply to groundwater recovery and monitoring wells intended for remediation of the shallow groundwater. These restrictions will be noted in the property plat for Person Generating Station which shall be filed with the Bernalillo County Zoning Division or its successor agencies, and in the property deed if land transfers to another owner. A copy of the revised plat with the restrictions noted will also be provided to NMED.

4.5 Groundwater Monitoring

[40 CFR 264.97(d),(e),(f); 264.98(e); 264.100(g)]

The post-closure groundwater monitoring program at the Person Generating Station site will consist of groundwater sampling and gauging in order to: (1) measure groundwater flow direction and calculate groundwater flow rates, and (2) assess the progress towards attainment of groundwater cleanup levels through groundwater sampling and analysis, as described in Section 4.5.1.~~4.3.4.~~ Results of the post-closure care semiannual sampling will be reported to the NMED on an annual basis. The annual report will include, but is not limited to, the following information obtained during semiannual sampling events:

- Progress on corrective action measures (e.g., reduction in size of groundwater plumes);
- Groundwater flow direction and rates;
- Analytical sampling results;
- Total amount of groundwater pumped and treated at the GWTS;
- Individual groundwater extraction rates and the volume of groundwater pumped from each of the extraction wells;

- Groundwater level measurements, including reference elevations and depth to water (in feet);
- Data and discussion of changes in location and levels of groundwater contamination;
- Migration pathways or impacts to human health or the environment that might require evaluation as a result of that year's sampling; and
- Recommended changes to corrective action activities or monitoring system, if any.

4.5.1 Sampling and Analysis Plan

Sampling Schedule

As described in Sections 4.4.1 and 4.4.2, monitoring wells that have not attained three consecutive years of compliance with cleanup levels (as of the date of NMED permit renewal) will be gauged and sampled on a semiannual basis until they attain three consecutive years of compliance. As of the date of this permit application, four wells have not attained three years. Operating groundwater extraction wells will also be sampled semiannually, although the extraction wells have already attained three years of compliance. Once all monitoring wells have attained three consecutive years of compliance, the GWTS system will be turned off, and the key wells, shown in Figure 14 and listed in Table 13, will be sampled to determine if rebound above the cleanup levels occurs. In addition, a background monitoring well, PSMW-07R, will be sampled annually for Appendix IX constituents prior to, and during, the phased shutdown process.

Sample Collection

Sample collection in most monitoring wells, with the exception of the extraction wells, is conducted using dedicated installed bladder pumps; however, because of a general decrease in the site water table, several monitoring wells require hand bailing. The dedicated pumps use compressed nitrogen gas to squeeze the bladder and force groundwater up to the surface. Two monitoring wells, PSMW-01B and PSMW-13B, have both a purge pump and sample pump installed. All other pump wells use only one bladder pump for purging and sampling. Pneumatic controllers are used to control the pressure and refill/discharge cycles.

For high yielding wells, field measurements of pH and specific conductivity shall be taken during purging. Stability is achieved when three consecutive measurements are within 0.1 pH units for pH, and within 20 micromhos (µmhos) for conductivity at the calculated purge volume. Due to exposure of the sampling lines to ambient temperatures, temperature is not used as an indication of stability. The final three measurements of these parameters shall be recorded in the field notes as the official field measurements. The official field measurements shall be recorded to the 0.01 pH unit and the pH meter must be accurate to the 0.01 pH unit. The conductivity measurements must be recorded to the nearest 10 µmhos and the conductivity meter must be

accurate to the 10 µmhos. During purging, the discharge rate of the wells should not exceed the rate used during development. In addition, the purge rate must not be so fast that the recharging water rushes turbulently into the well, creating an audible noise.

Low yielding wells may be evacuated to dryness once. As soon as the well recovers sufficiently to yield an adequate sample volume, samples should be collected and containerized in the order of the parameters' volatilization sensitivity. The well should be retested for pH and specific conductance after sampling as a measure of purging efficiency, and as a check on the stability of the water samples over time. Whenever full recovery exceeds two hours, the sample should be extracted as soon as sufficient volume is available for a sample for each parameter. At no time, should the well be pumped to dryness if the recharge rate causes the formation water to vigorously cascade down the sides of the screen and cause an accelerated loss of volatiles.

Measurements of temperature will also be obtained during sampling. Field measurements including the volume of water purged, whether or not the well purged dry and the depth that the sampling pump, if used, was placed during sampling and purging will be provided in the annual report of semiannual sampling. Field measurements will be taken prior to and after purging for low yield wells that are purged dry prior to sampling.

All monitoring well purge water shall be stored in containers until discharged into the influent of the Person Generating Station GWTS. The required sample volumes, preservatives, container types, and holding times shall follow appropriate EPA test method requirements. Water samples will not be filtered. Sample containers for analysis of volatiles will be filled to eliminate headspace.

The majority of groundwater samples will be analyzed for volatile chlorinated aliphatic hydrocarbons by EPA Method 8260. All samples to be analyzed by this method will be preserved using hydrochloric acid and will be stored and transported at a maximum of 4 degrees centigrade. Samples will be packaged in a manner that prevents breakage. Packaging will prevent direct contact between sample containers.

The chain-of-custody (COC) record shall ensure that the samples are not left unattended unless they are in a secure, locked location, with restricted access. Only authorized people shall have access to the samples. The COC provides the necessary information to the laboratory (e.g., identification of sample, analyses requested, preservatives used, etc.). The COC shall include the following:

- Facility name;
- Sample identification number (same as well identification number, duplicates will be given a different identification number);

- Date and time of collection;
- Number of containers and analyses required (e.g., VOCs, total metals);
- Preservatives used or required;
- Sample container temperatures or presence of ice in shipping container upon opening at the laboratory;
- Signature, date, and time of receipt of collector and all person(s) in the chain of possession; and
- Laboratory personnel statement of the condition of seals at time of receipt at laboratory.

Analytical Requirements

All groundwater samples will be analyzed for VOCs using EPA Method 8260. In addition, samples from wells PSMW-07R (the background well), PSMW-01R, PSMW-08A, PSMW-10, and PSMW-13A will be analyzed annually for all constituents defined in 40 CFR 264 Appendix IX to demonstrate that new contaminants are not impacting the groundwater from upgradient sources.

If any Appendix IX constituents are detected in groundwater above the relevant standards (the more stringent of the maximum contaminant levels under the Safe Water Drinking Act or New Mexico Water Quality Control Commission standards) not already identified as hazardous constituents, PNM may resample within one month and repeat the Appendix IX analysis. If the second analysis confirms the presence of any new constituents (as detected in the first sampling event) PNM will report the concentrations of these constituents to NMED within seven (7) calendar days after the completion of the second analysis and add them to the monitoring list. If PNM chooses not to resample, then the new constituents identified in the first sampling event will be reported to NMED within seven (7) calendar days after completion of the initial analysis and add them to the monitoring list.

Data Quality

Field Quality Assessment/Quality Control (QA/QC) samples shall be routinely collected and reported to ensure that the groundwater samples are representative of the groundwater quality, and to ensure that cross-contamination has not occurred.

The selected analytical laboratory shall prepare a minimum of one trip blank for each sampling event. The trip blank shall be prepared by filling one 40 milliliter (ml) vial with deionized, distilled water. The container must be filled to eliminate headspace. The deionized, distilled water must be free of contamination. The trip blank shall be transported from the laboratory to the sampling location and returned to the laboratory in a manner identical to the handling

procedure used for the monitoring well samples. The trip blanks shall be analyzed for volatile organic constituents using EPA Method 8260. Trip blank analyses shall not be used to correct the groundwater sample data. Trip blank contamination can be attributed to improperly cleaned containers, contaminated deionized, distilled water, cross-contamination during sample transportation, or at the laboratory. If contamination is detected in a trip blank, the probable cause of the contamination will be determined as quickly as possible. If necessary, PNM or the laboratory shall modify the sampling and/or laboratory procedures in question to correct potential problems.

For each sampling event, at least one set of duplicate samples shall be collected per 10 wells. The duplicate volatile sample shall be collected immediately after the primary volatile sample, and assigned a unique sample identification number. Duplicate samples shall be analyzed for the same parameters as the primary groundwater samples. In addition, they shall be handled in a manner identical to the handling procedures used for the primary groundwater samples. Duplicate sample analyses shall not be used to correct the primary groundwater sample data.

Before and after the daily sampling event, a calibration check using the manufacturer's directions and known standards shall be performed for the pH/conductivity meter and noted in the instrument logbook. The instrument manufacturer's procedures for calibration shall be used, and any deviations, problems, and repairs shall be noted in the instrument logbook. The batteries shall be tested prior to use. If the instrument provides unstable readings, the batteries shall be replaced. The manufacturer's procedures for cleaning and storage of the equipment shall be used and any deviations, or problems shall be noted in the instrument logbook.

PNM shall ensure that the laboratory performing the sample analyses adheres to QA/QC procedures and methods described in EPA (1986), the most recent edition of SW-846, or other EPA-approved laboratory QA/QC procedures. The purpose of the laboratory QA/QC program is to ensure the validity and reliability of the laboratory data and shall include the following:

- Use of EPA acceptable sample preparation and analytical methods.
- Calibration of laboratory instruments to within acceptable limits according to EPA or manufacturer's specifications. Reference standards shall be used when necessary.
- Periodic inspection, maintenance, and servicing of laboratory instruments and equipment.
- Periodic training, testing, and evaluation of laboratory personnel to ensure accurate performance.
- The use of reference standards and QC samples (e.g., checks, spikes, laboratory blanks, duplicates, splits) as necessary to determine the accuracy and precision of

procedures, instruments, and operators, as well as the identification of potential interference by the sample matrix.

- QA/QC samples shall not to be used to correct data.
- The use of adequate statistical procedures (e.g., QC charts) to monitor the precision and accuracy of the data, and to establish acceptable confidence limits.
- The use of the appropriate percentage of the reference standards, spiked standards, blanks and split samples based on EPA standards.
- If an alternative method for analysis is used, split samples shall be run with another laboratory for comparison purposes, and shall be included with the laboratory data.
- Review of results to identify and correct problems within the measurement system (e.g., instrumentation problems, inadequate operator training, inaccurate measurement methodologies, etc.).
- Documenting the performance of systems and operators.
- Documenting any deviation from SW-846 or other EPA-approved procedures (latest editions).
- Use of acceptable sample identification and, as necessary, formal chain-of-custody procedures in the laboratory.
- Maintenance and storage of complete records, charts, and logs of all pertinent laboratory calibration, analytical, and QC activities and data.
- Ensure all data outputs are presented in their prescribed format. The following information shall be provided for each parameter and included on the raw laboratory data sheets for each sampling event: sample identification number; detection limit; percent recovery; surrogate standards; date that sample was collected; date that sample was received by laboratory; date that sample was extracted, if applicable; and date that sample was analyzed.
- Laboratory logbooks shall include the following information:
- Observation of headspace in any sample received for volatile analysis.
- Results for all QA/QC samples.
- Time, date, and name of person for each processing step.
- Sample preparation technique.
- Instrumental methods.
- The actual holding time information.

- Laboratory sample identification number (if different from field identification number).
- Analyses to be performed.

4.5.2 Groundwater Gauging

Groundwater gauging will consist of semiannual water elevation measurements in all wells within the monitoring network, per Table 13. Water level measurements will be obtained within 24 hours prior to the purging or sampling of a well or at least 48 hours after the well has been purged or sampled. ~~in which a groundwater sample is collected. Water elevation measurements shall be taken on all monitoring wells prior to sampling. However, since the primary indicators of stability are pH and conductivity, and, historically, water levels have changed very little over the duration of a typical sampling event, it is unnecessary to take water level measurements within 24 hours prior to sampling any monitoring well. Therefore, water levels may be measured up to a month prior to sampling a monitoring well.~~ These data will be used to generate water level contour maps and to calculate monitoring well approximate purge volumes.

All measurements shall be made from a visibly marked surveyed reference point on the well casing rim. The elevation of the reference point shall be measured to within 0.01 ft with respect to mean sea level by a professional land surveyor. The surveyed elevations and the materials of construction for the measuring devices shall be recorded in the field notes, and included in the facility operating record.

An electronic sounder will be used to measure monitoring well water levels. The depth to water is determined by the sounding reading taken at the surveyed point on the well casing rim. The depth to water measurement shall be subtracted from the elevation of the surveyed point in order to determine the water elevation measurement. All water elevation measurements shall be accurate to the nearest 0.01 ft and recorded to the nearest 0.01 ft.

If PNM suspects the presence of any light or dense immiscible layers in a monitoring well due to visible evidence or significant increases in dissolved contaminants, the guidelines in EPA (1986) shall be followed for determining the presence, measuring the thickness, and collecting a sample of these layers. These procedures shall be completed prior to purging the well.

4.6 Field Notes Reporting Requirements

Field notes shall be included in the facility operating record. They shall include the following information:

- Well identification;
- Well depth;

- Static water level depth, measurement method, and date measurement was taken;
- Presence of immiscible layers, detection method, and collection method, if applicable;
- Well purging/sampling procedures and equipment;
- Purge volume and purge/sample pumping rate;
- Time purge began and completed;
- Sample identification;
- Date and time of sample collection;
- Types of sample containers and preservatives used;
- Analytical methods and/or parameters requested for analysis;
- Name of sample collector;
- COC information;
- Field observations on sampling event;
- Climatic conditions including approximate air temperature and- wind speed;
- Purpose of sampling (e.g., detection, compliance, corrective action, etc.); and
- Well condition, including:
  - security of well cap,
  - presence of cracks in concrete pad,
  - presence of standing water around well,
  - condition of protective posts,
  - condition of inner and outer well casing, and presence of cracks, holes and/or burrows in the ground near the well.

5.0 References

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Figures

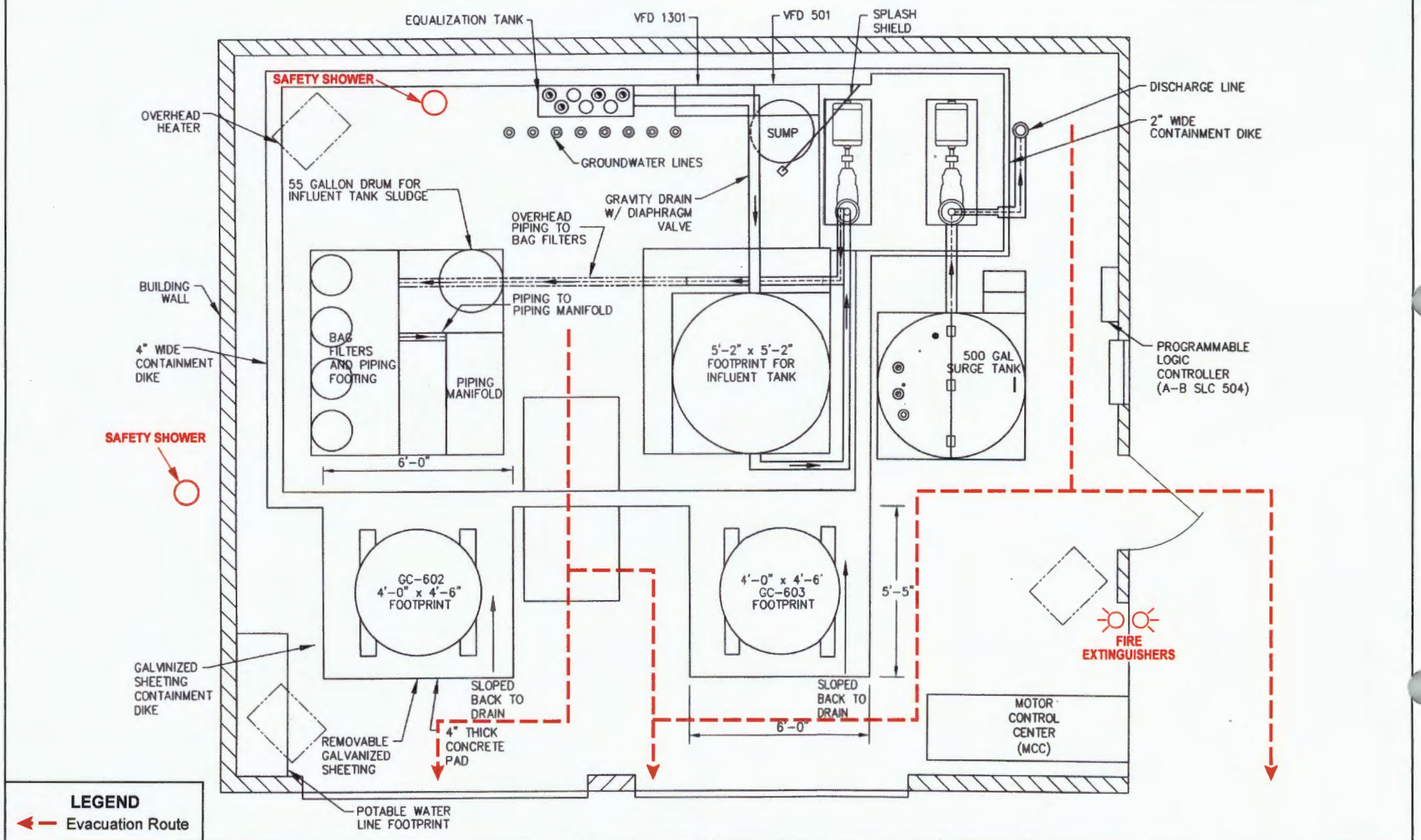

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Figure 5
Groundwater Treatment System Building
Emergency Equipment Location
and Evacuation Routes
Person Generating Station
Public Service Company of New Mexico

SHAW PROJECT No. / Drawing No.
135467.01 A1

Figure 14
Key Well Network
Person Generating Station
Public Service Company of New Mexico

SHAW PROJECT No. / Drawing No.
135467.01 B1

Tables

Table 1
Applicable Regulatory References and Corresponding Application Location
Person Generating Station

Regulatory Citation(s)	Description of Requirement	Location in this Document
General Facility Information		
§270.14(b)(1)	General facility description	Sections 1.1.1, 1.1.2, 1.2, 2.1
§270.14(b)(11)(i),(ii); §264.18(a)	Location standards and seismic standard applicability	Section 1.1.2
§270.14(b)(11)(iii) and (b)(19)(ii); §264.18(b)	100-Year floodplain and topography	Section 1.1.2, Figure 3
§270.14(b)(19)(iii), (iv), (v)	Surface waters, surrounding land uses, and wind rose	Section 1.1.3, Figure 4
§270.14(b)(19)(vii), (viii), (x), (xii)	Legal boundaries, access controls, on-site buildings, and operational units	Section 1.1.1, Figure 2
§270.14(b)(19)(ix)and (c)(3)	On- and off-site wells	Section 4.2.2, Figure 6
§270.14(b)(4); §264.14(b)(2) and (c)	Security provisions	Section 2.2
§270.14(b)(5); §264.15~~(a), (b)~~	Inspection provisions	Section 2.3
§270.14(b)(6); §264, Subpart C	Preparedness and prevention	Section 2.4
§264.32	Required emergency equipment	Section 2.4.1
§264.33	Testing and maintenance of emergency equipment	Section 2.4.2
§264.34	Access to communications and alarm systems	Section 2.4.3
§264.37	Arrangements with local authorities	Section 2.4.4
§270.30(d)	Hazard or release mitigation	Section 2.4.5.5
§264.73	Operating record and documents to be maintained at the facility	Section 2.5.1
§264.118(a)	Permit and permit application	Section 2.5.1 (bullet 1)
§264.74(b); §270.30(j)(2) and (3)	Monitoring records	Section 2.5.1 (bullet 2)
§264.73(b)(6); §264.100(g)	Groundwater monitoring, testing, and analytical data results	Sections 2.5.1 (bullet 3) and 4.5
§264.15(b)(2) and (d); §264.73(b)(5)	Inspection records (schedule and reports)	Section 2.5.1 (bullet 4)
§264.73(b)(4)	Repairs, spill response actions, incidents requiring contingency plan implementation	Section 2.5.1 (bullet 5)
§264.16(d)	Training records	Section 2.5.1 (bullet 6)
§264.73(b)(8); §264.144(d)	Post-closure care cost estimate	Section 2.5.1 (bullet 7)
§270.30(1)(6)(i), (ii), (iii)	24-Hour reporting	Section 2.5.2

Table 1 (Continued)
Regulatory References and Corresponding Application Location
Person Generating Station

Regulatory Citation(s)	Description of Requirement	Location in this Document
General Facility Information (Continued)		
§270.42; §264.118(d)	Post-closure care plan changes	Section 2.5.3
§264.16	Personnel training	Section 2.6
Post-Closure Care Conditions and Requirements for Groundwater Units		
§264.96(c); §264.100(f); §264.117	Post-closure care period	Section 4.4.2
§260.100(f); §270.14(b)(13), (c)(5) and (7); §264 Subpart F; §264.97(d) and (e); §264.117(d); §264.188(b)	Post-closure care plan, ~~and~~ procedures, and remediation	Sections 4.0, ~~and~~ 4.1, and 4.4
§270.14(b)(14); §264.119	Post-closure notifications	NA
§264.117(a)(1)	Use of property	Section 4.4.6
§270.14(b)(16); §264.144(b), (c), and (d)~~(c); §264.144(d)~~	Cost estimate for facility post-closure	Section 2.8
§270.14(b)(16); §264.145; §264.147; §264.151	Financial assurance	Sections 2.8, 2.9
Corrective Action Conditions and Requirements for Groundwater Units		
§264.100	Corrective action program, general requirements	Section 4.1
§264.93; §264.94(a); §264.100(a)(1)(2)	Hazardous constituents and concentration limits	Sections 1.2.1.2, 4.1.2, 4.2.1
§270.14(c)(4)	Contaminant plume maps	Section 4.3, Figures 8 through 13
§270.14(c)(3); §264.95; §264.97; §264.100(a)(3)	Point of compliance	Section 4.4.1
§264.31; §264.97(c)	Monitoring well network design and well construction	Section 4.2.2, Appendix C
§270.14(c)(2)	Groundwater flow rate and direction	Section 4.2.2
§264.97(f)	Groundwater surface elevation	Section 4.2.2
§264.100(a)(4) and (f)	Duration of corrective action	Section 4.4.2
§264.93	Groundwater monitoring frequency	Section 4.4.2
§270.14(c)(5), (7); §264.97(c); §264.100(a)(3), (d)	Groundwater monitoring program, revised well network	Sections 4.4.3, Figures 6, 14, and 15
§270.130(e), (l)(1), (2)	Groundwater treatment system operations and maintenance	Section 4.4.4
§264.97(d), (e); §264.98(e)	Groundwater sampling and analysis procedures	Section 4.5

NA = Not applicable.

Table 12
Comparison of 2000 Permit and Approved~~Proposed~~
Monitoring Requirements for Shallow and Deeper Groundwater
Person Generating Station

Well ID	2000 Permit Requirements	Approved ~~Proposed~~ Monitoring (NMED, 2009)	Justification
PSMW-01R	Semiannual sampling and gauging	Semiannual sampling and gauging. Annual sampling for Appendix IX constituents.	~~No change; p~~Prior to GWTS shutdown, sample until three years compliance achieved. Key well; after GWTS shutdown, sample until one additional year of compliance achieved. Yearly sampling for Appendix IX constituents.
PSMW-01B	Semiannual sampling and gauging	None	Attained three years of compliance.
PSMW-02	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW-03	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW-03B	Semiannual sampling and gauging	None	Attained three years of compliance.
PSMW-04	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW-06R	Semiannual sampling and gauging	None	Attained three years of compliance.
PSMW-07R	Semiannual sampling and gauging	Annual sampling and semiannual gauging through GWTS shutdown	Currently sampled semiannually using EPA Method 8021 and annually for Appendix IX constituents. Analyte levels have been below cleanup levels for the duration of the monitoring program. Key well; change to yearly sampling for Appendix IX constituents.
PSMW-08A	Semiannual sampling and gauging	Semiannual sampling and gauging. Annual sampling for Appendix IX constituents.	~~No change; p~~Prior to GWTS shutdown, sample until three years compliance achieved. Key well; after GWTS shutdown, sample until one additional year of compliance achieved. Yearly sampling for Appendix IX constituents.
PSMW-08B	Semiannual sampling and gauging	None	Attained three years of compliance.
PSMW-09	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW-10	Semiannual sampling and gauging	Semiannual sampling and gauging. Annual sampling for Appendix IX constituents.	~~No change; p~~Prior to GWTS shutdown, sample until three years compliance achieved. Key well; after GWTS shutdown, sample until one additional year of compliance achieved. Yearly sampling for Appendix IX constituents.
PSMW-11	Semiannual sampling and gauging	Annual sampling and semiannual gauging~~None~~	Analyte levels have been below cleanup levels for the duration of the monitoring program. NMED requests that this well be sampled annually and gauged semiannually (NMED, 2009).

Table 12 (Continued)
Comparison of 2000 Permit and Approved~~Proposed~~
Monitoring Requirements for Shallow and Deeper Groundwater
Person Generating Station

Well ID	2000 Permit Requirements	Approved ~~Proposed~~ Monitoring (NMED, 2009)	Justification
PSMW-13A	Semiannual sampling and gauging	Semiannual sampling and gauging. Annual sampling for Appendix IX constituents.	~~No change; p~~Prior to GWTS shutdown, sample until three years compliance achieved. Key well; after GWTS shutdown, sample until one additional year of compliance achieved. Yearly sampling for Appendix IX constituents.
PSMW-13B	Semiannual sampling and gauging	None	Attained three years of compliance.
PSMW-14	Semiannual sampling and gauging	None	Analyte levels have been below cleanup levels for the duration of the monitoring program.
PSMW-17	Semiannual sampling and gauging	~~Semia~~Annual sampling and semiannual gauging ~~during GWTS shutdown~~	Well has attained three years of compliance; continue sampling annually. a~~A~~fter GWTS shutdown, sample until one additional year of compliance achieved (key well for southern plume boundary).
PSMW-18	Semiannual sampling and gauging	~~Semia~~Annual sampling and gauging ~~during GWTS shutdown~~	Well has attained three years of compliance; continue sampling annually. a~~A~~fter GWTS shutdown, sample until one additional year of compliance achieved (key well for northern plume boundary).
PSMW-19	Semiannual sampling and gauging	None	Analyte levels have been below cleanup levels for the duration of the monitoring program.
PSMW-19X	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW-20	Semiannual sampling and gauging	Annual sampling and semiannual gauging~~None~~	Well has attained three years of compliance; continue sampling annually. After GWTS shutdown, sample until one additional year of compliance achieved. NMED requests that this well be sampled annually and gauged semiannually (NMED, 2009). ~~Attained three years of compliance.~~
PSMW-21	Semiannual sampling and gauging	None	Analyte levels have been below cleanup levels for the duration of the monitoring program.
PSMW-22	Semiannual sampling and gauging	~~Semia~~Annual sampling and semiannual gauging ~~during GWTS shutdown~~	Well has attained three years of compliance; continue sampling annually. a~~A~~fter GWTS shutdown, sample until one additional year of compliance achieved (key well for plume centerline).
PSMW-23	Semiannual sampling and gauging	None	Analyte levels have been below cleanup levels for the duration of the monitoring program.

Table 12 (Continued)
Comparison of 2000 Permit and Approved~~Proposed~~
Monitoring Requirements for Shallow and Deeper Groundwater
Person Generating Station

Well ID	2000 Permit Requirements	Approved ~~Proposed~~ Monitoring (NMED, 2009)	Justification
PSMW-25	Semiannual sampling and gauging	None	Extraction well. Not functional because water table has fallen below screen.
PSMW-26	Semiannual sampling and gauging	None	Extraction well. Not functional because water table has fallen below screen.
PSMW-27	Semiannual sampling and gauging	~~Semia~~Annual sampling and semiannual gauging ~~during GWTS shutdown~~	Well has attained three years of compliance; continue sampling annually. ~~a~~After GWTS shutdown, sample until one additional year of compliance achieved (key well for eastern plume boundary).
PSMW-28	Semiannual sampling and gauging	None	Analyte levels have been below cleanup levels for the duration of the monitoring program.
PSMW-29	Semiannual sampling and gauging	None	Analyte levels have been below cleanup levels for the duration of the monitoring program.
PSMW-30	Semiannual sampling and gauging	None	Analyte levels have been below cleanup levels for the duration of the monitoring program.
PSMW-31	Semiannual sampling and gauging	None	Analyte levels have been below cleanup levels for the duration of the monitoring program.
PSMW-32	Semiannual sampling and gauging	None	Analyte levels have been below cleanup levels for the duration of the monitoring program.
PSMW-33	Semiannual sampling and gauging	None	Analyte levels have been below cleanup levels for the duration of the monitoring program.
PSMW-34	Semiannual sampling and gauging	None	Analyte levels have been below cleanup levels for the duration of the monitoring program.
PSMW-35	Semiannual sampling and gauging	None	Analyte levels have been below cleanup levels for the duration of the monitoring program.
PSMW-36	Semiannual sampling and gauging	None	Analyte levels have been below cleanup levels for the duration of the monitoring program.
PSMW-37	Semiannual sampling and gauging	Annual sampling and semiannual gauging~~None~~	Well has attained three years of compliance; continue sampling annually. After GWTS shutdown, sample until one additional year of compliance achieved. NMED requests that this well be sampled annually and gauged semiannually (NMED, 2009).~~Attained three years of compliance.~~

Table 12 (Continued)
Comparison of 2000 Permit and Approved~~Proposed~~
Monitoring Requirements for Shallow and Deeper Groundwater
Person Generating Station

Well ID	2000 Permit Requirements	Approved ~~Proposed~~ Monitoring (NMED, 2009)	Justification
VEW	Semiannual sampling and gauging	Semiannual sampling and gauging	Extraction well. Continue to sample semiannually prior to GWTS shutdown although three years of compliance have been attained at this well. After GWTS shutdown, sample until one additional year of compliance achieved.
EW-1	Semiannual sampling and gauging	Semiannual sampling and gauging	Extraction well. Continue to sample semiannually prior to GWTS shutdown although three years of compliance have been attained at this well. After GWTS shutdown, sample until one additional year of compliance achieved.
EW-2	Semiannual sampling and gauging	Semiannual sampling and gauging	Extraction well. Continue to sample semiannually prior to GWTS shutdown although three years of compliance have been attained at this well. After GWTS shutdown, sample until one additional year of compliance achieved.
EW-3	Semiannual sampling and gauging	Semiannual sampling and gauging	Extraction well. Continue to sample semiannually prior to GWTS shutdown although three years of compliance have been attained at this well. After GWTS shutdown, sample until one additional year of compliance achieved.
EW-4	Semiannual sampling and gauging	Semiannual sampling and gauging	Extraction well. Continue to sample semiannually prior to GWTS shutdown although three years of compliance have been attained at this well. After GWTS shutdown, sample until one additional year of compliance achieved.
EW-5	Semiannual sampling and gauging	None	Extraction well. Not functional due to collapsed well casing.
PSMW17-300	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW17-400	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW17-500	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW17-600	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW17-700	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW17-800	Semiannual sampling and gauging	None	Analyte levels have been below cleanup levels for the duration of the monitoring program.
PSMW17-900	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW19-300	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW19-400	Semiannual gauging only	None	Proximal wells provide adequate water level data.

Table 12 (Continued)
Comparison of 2000 Permit and Approved~~Proposed~~
Monitoring Requirements for Shallow and Deeper Groundwater
Person Generating Station

Well ID	2000 Permit Requirements	Approved ~~Proposed~~ Monitoring (NMED, 2009)	Justification
PSMW19-500	Semiannual sampling and gauging	None	Attained three years of compliance.
PSMW19-600	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW19-700	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW19-800	Semiannual sampling and gauging	None	Attained three years of compliance.
PSMW19-900	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW21-400	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW21-500	Semiannual sampling and gauging	None	Analyte levels have been below cleanup levels for the duration of the monitoring program.
PSMW21-600	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW21-700	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW21-800	Semiannual sampling and gauging	None	Analyte levels have been below cleanup levels for the duration of the monitoring program.
PSMW21-900	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW22-300	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW22-400	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW22-500	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW22-600	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW22-700	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW22-800	Semiannual sampling and gauging	None	Analyte levels have been below cleanup levels for the duration of the monitoring program.
PSMW22-900	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW24-400	Semiannual sampling and gauging	None	Analyte levels have been below cleanup levels for the duration of the monitoring program.
PSMW24-500	Semiannual sampling and gauging	Annual sampling and semiannual gauging~~None~~	Attained three years of compliance. NMED requests that this well be sampled annually and gauged semiannually (NMED, 2009).
PSMW24-600	Semiannual sampling and gauging	None	Analyte levels have been below cleanup levels for the duration of the monitoring program.
PSMW24-700	Semiannual gauging only	None	Proximal wells provide adequate water level data.

Table 12 (Continued)
Comparison of 2000 Permit and Approved~~Proposed~~
Monitoring Requirements for Shallow and Deeper Groundwater
Person Generating Station

Well ID	2000 Permit Requirements	Approved ~~Proposed~~ Monitoring (NMED, 2009)	Justification
PSMW24-800	Semiannual sampling and gauging	None	Attained three years of compliance.
PSMW24-900	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW25-400	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW25-500	Semiannual sampling and gauging	None	Analyte levels have been below cleanup levels for the duration of the monitoring program.
PSMW25-600	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW25-700	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW25-800	Semiannual sampling and gauging	None	Analyte levels have been below cleanup levels for the duration of the monitoring program.
PSMW25-900	Semiannual gauging only	None	Proximal wells provide adequate water level data.
PSMW27-400	Semiannual sampling and gauging	None	Analyte levels have been below cleanup levels for the duration of the monitoring program.
PSMW27-500	Semiannual sampling and gauging	Annual sampling and semiannual gauging~~None~~	Attained three years of compliance. NMED requests that this well be sampled annually and gauged semiannually (NMED, 2009).
PSMW27-600	Semiannual sampling and gauging	Annual sampling and semiannual gauging~~None~~	Analyte levels have been below cleanup levels for the duration of the monitoring program. NMED requests that this well be sampled annually and gauged semiannually (NMED, 2009).

GWTS = Groundwater treatment system.
ID = Identification.

Table 13
~~Proposed~~ Key Well Network
Person Generating Station

Well ID	Semiannual Sampling Prior to GWTS Shutdown	Semiannual Sampling During GWTS Shutdown	Reason for Selection as Key Well
PSMW-01R[a,b]	X	X	Point of compliance well
PSMW-07R[c,b]	X	X	Background well
PSMW-08A[a,b]	X	X	Plume center well
PSMW-10[a,b]	X	X	Plume center well
PSMW-11	X[d]	X	Requested by NMED
PSMW-13A[a,b]	X	X	Plume center well
PSMW-17		X	Southern plume boundary well
PSMW-18		X	Northern plume boundary well
PSMW-20	X[d]	X	Requested by NMED
PSMW-22		X	Plume center well
PSMW-27		X	Downgradient plume boundary well
PSMW-37	X[d]	X	Requested by NMED
VEW (Extraction well)	X	X	Extraction well
EW-1 (Extraction well)	X	X	Extraction well
EW-2 (Extraction well)	X	X	Extraction well
EW-3 (Extraction well)	X	X	Extraction well
EW-4 (Extraction well)	X	X	Extraction well
PSMW-24C-500	X[d]	X	Requested by NMED
PSMW-27C-500	X[d]	X	Requested by NMED
PSMW-27C-600	X[d]	X	Requested by NMED

[a]As of the date of this permit application, this well has not met three years of compliance.

[b]Will be sampled annually for Appendix IX constituents.

[c]Monitoring well PSMW-07R is a background well that will be sampled annually for Appendix IX constituents.

[d]Annual sampling.

GWTS = Groundwater treatment system.

ID = Identification.

Table 14
Inspection Provisions for Person Generating Station

Inspection Provision	Frequency of Inspection
Facility Inspections	
Security Fencing and Gates – damage or breach in 8-feet-high perimeter fencing or evidence of breach or tampering with gates and/or gate locks	Semiannually
Emergency Equipment – system alarm, fire extinguisher, and safety shower operational status	Semiannually
GWTS Operating Equipment[a]	
Tanks (percent full) – influent and effluent surge levels	Semiannually
Golf Course pond level	Semiannually
Golf Course remote system shut off operational status	Semiannually
I-25 Vault level	Semiannually
Totalizer readings (gallons)	Semiannually
Flow Readings (gallons per minute) – effluent and extraction wells	Semiannually
Transfer Pumps (operating frequency)	Semiannually
Pressure Readings (pounds per square inch) – bag filters	Semiannually
GWTS Pump – cracks in silicon carbide parts; melting or deformation of shaft support, bushing, and rear casing socket; abrasion or cuts of casing liner; wear, scoring, or grooving of carbon bushing; wear of mouth ring; material trapped in impeller vanes; cracks or grooves in inner magnet encapsulation; slurry in pumped liquid; and abrasion of rear casing	Semiannually
Well Inspections	
Monitoring and Extraction Wells – surface leakage into well; integrity of concrete apron and well cover; and signs of malfunction, deterioration, or vandalism	Semiannually
Unlined Well RCRA Cap	
Integrity of the concrete RCRA cap, including cracks or other signs of malfunction, deterioration, or vandalism	Semiannually

[a]Additional details of GWTS inspections available in the Operations and Maintenance Manual, which is kept on site (Parsons, May 2003).

GWTS = Groundwater Treatment System.

Attachment 2
Post-Closure Care Cost Estimate

Person Generating Station
Post Closure Care Cost Estimate for 2009

Line Item	Description		Cost
1a	RCRA Permit - Yearly Administration, Inspections, and Reporting (through 2012)-See Detail 1a	$	25,140.00
1b	Shallow GW Sampling Program - Annual Cost (through 2012)-See Detail 1b	$	47,710.00
1c	Deeper GW Sampling Program - Annual Cost (through 2012)-See Detail 1c	$	46,100.00
1d	Increased Sampling Frequency to Demonstrate Attainment of GW Goals (to replace line item 1b costs one time)- See Detail 1d	$	92,620.00
2	RCRA Permit - Non-Recurring Costs for 2009 - Additional Permit Activities-See Detail 2	$	124,200.00
2a	Future NMED Permit Fees, Associated PNM Labor and Contractor Costs - See Detail 2a	$	115,980.00
3	Shallow GW Corrective Action Program - Equipment Costs - See Detail 3	$	202,500.00
4	Shallow GW Corrective Action Program (through 2009) - Annual Operation and Maintenance Costs - See Detail 4	$	55,190.00
5	Deeper Groundwater Assessment Program - Completion Costs - See Detail 5	$	-
6	Deeper Groundwater Corrective Action Program - Installation Costs - See Detail 6	$	-
7	Deeper Groundwater Corrective Action Program - Annual Operation Costs - See Detail 7	$	-
8	Estimated Cost for 21st Year (2009) of Permit (line items 1a+1b+1c+2+4+5+6+7)	$	298,340.00
9	Cost for Next 4 Years of PC Period (2009 - 2012): line 8 + line 1d + line 2a + line 3 + 3*(line 1a) + 2*(line 1b) + 3*(line 1c)	$	1,018,580.00

Date of Cost Estimate: 1/15/2009

Notes:

1. Line item 2 is based on an early permit renewal application that was submitted to the NMED in 2007.
2. Line item 4 - CAP program for shallow GW estimated to require 1 additional year (2009) of active pumping to complete (2010 - 2012 would require verification sampling only.)
3. Assume that all activities relative to the CAP will be completed by the end of 2012.
4. Line items 5, 6, and 7 are set to 0 - assumes no engineered corrective action will be needed for deeper GW.
5. All labor costs are calculated at $85 per hour.

Detail 1
RCRA Permit - Yearly Administration, Inspections, GW Sampling, Maintenance, and Reporting
(2009 Through 2012)

Assumed Average Labor Rate For All Hourly Activities: $85.00

Line Item	Description	Labor or Unit Rate	Hrs/item or 1 Unit	Items Per Year	Annual Cost ($)	Group Subtotal
	Permit-Required Inspections					
1	Closure Cap Inspection	$85.00	1	2	$ 170.00	
2	Security Fence Inspection	$85.00	1	2	$ 170.00	
						$ 340.00
	Program Administration/Reporting					
3	Administrative Activities, Meetings, and Regulatory Contact	$ 85.00	120	1	$ 10,200.00	
4	Annual Data Report and Other Reports Preparation	$ 85.00	160	1	$ 13,600.00	
5	Miscellaneous Costs: Copies, Supplies, Reference Materials, Etc.	$ 1,000.00	1	1	$ 1,000.00	
6	RESERVED					
						$ 24,800.00
	Subtotal for Detail 1a:					$ 25,140.00
	Shallow GW Sampling Program (35 wells)					
7	Preparation - Equipment Checkout, Planning, and Set-Up	$ 85.00	8	2	$ 1,360.00	
8	Water Level Measurements (2 operators, WL readings at 43 wells)	$ 85.00	16	2	$ 2,720.00	
9	Purge and Sampling of 35 Wells (2 operators)	$ 85.00	77	2	$ 13,090.00	
10	Data Review/Evaluation	$ 85.00	40	2	$ 6,800.00	
11	Administration	$ 85.00	24	2	$ 4,080.00	
12	Well Replacement/Maintenance (assume expenditure of $5,000/yr)	$ 5,000.00	1	1	$ 5,000.00	
13	Sampling Supplies and Equipment	$ 500.00	1	2	$ 1,000.00	
14	Lab Analysis (8021halo x 40)	$ 100.00	40	2	$ 8,000.00	
15	Lab Analysis (App. IX x 1)	$ 1,800.00	1	1	$ 1,800.00	
16	Non-Labor Costs: Vehicles, Gas Cylinders, and Miscellaneous	$ 1,930.00	1	2	$ 3,860.00	
	Subtotal for Detail 1b:					$ 47,710.00
	Deeper GW Sampling Program (15 wells)					
17	Preparation - Equipment checkout, planning, set up.	$ 85.00	8	2	$ 1,360.00	
18	Water Level Measurements (2 operators, WL readings at 42 wells)	$ 85.00	16	2	$ 2,720.00	
19	Purge and Sampling of 15 Deep CAD Wells (2 operators)	$ 85.00	102	2	$ 17,340.00	
20	Data Review/Evaluation	$ 85.00	40	2	$ 6,800.00	
21	Administration	$ 85.00	24	2	$ 4,080.00	
22	Well Maintenance (assume expenditure of $5,000/yr)	$ 5,000.00	1	1	$ 5,000.00	
23	Sampling Supplies/Equipment	$ 500.00	1	2	$ 1,000.00	
24	Lab Analysis (8021halo x 17)	$ 100.00	17	2	$ 3,400.00	
25	Non-Labor Costs: Vehicles, Gas Cylinders, and Miscellaneous	$ 2,200.00	1	2	$ 4,400.00	
	Subtotal for Detail 1c:					$ 46,100.00
26	Detail 1 Total:					$ 118,950.00
	Increased Sampling To Demonstrate Attainment of GW Goals					
26	Annual NMED PC Business fee				$ 4,000	
27	Additional Sampling at Shallow Groundwater Wells					
	Subtotal For Detail 1d:					$ 92,620.00

Shallow GW Well Group	Number	Sample Hrs @	Total Hours
1R,3B,6R,7R,8A,8B,10,11,13A,14,17,22,23,27			
29,31,32,34,35,37	20	1.0	20.0
1B,13B	2	0.5	1.0
EW-1, VEW, EW-2, EW-3, EW-4	5	0.5	2.5
18,19,20,21,33	5	1.5	7.5
28,30,36	3	2.5	7.5
Totals:	35		38.5

Cylinders: 0.5 per well (average), $20 per cyl., = 18 * 0.5 * $20 = $180
Vehicles: assume two rental vehicles for 2-week period - $1500
Misc: $250
Estimate per sampling event $ 1,930

Deeper GW Well Group	Number	Sample Hrs @	Total Hours
17-8,19-8,22-8	3	6.0	18.0
19-5, 21-5,8, 24-4,5,6,8, 25-5,8	9	3.0	27.0
27-4,5,6	3	2.0	6.0
Totals:	15	11.0	51.0

Cylinders: 1.5 per well (average), $20 per cyl., = 15 * 1.5 * $20 = $450
Misc: $250
Vehicles: assume two rental vehicles for 2-week period - $1500
Estimate per sampling event $ 2,200

Note: Sampling will be increased from biannual to quarterly one time during program. This will be done to demonstrate asymptotic behavior of GW analytical results as a trigger to evaluate system for Technical Infeasibility or Alternate Abatement Standard, or to demonstrate that groundwater standards have been achieved.

Detail 2
RCRA Permit - Non-Recurring Costs For 2009

Assumed Average Labor Rate For All Hourly Activities: $85.00

In 2007, an early permit renewal application was submitted to the NMED. However, the permit fee will be due sometime in 2009.

Line Item	Description	Labor or Unit Rate	Hrs/item or 1 Unit	Items Per Year	Annual Cost ($)	Group Subtotal
	Major Permit Activities to be Completed in 2009					
1	NMED Permit Renewal Fee (Early Permit Renewal Application)	$60,000.00	1	1	$60,000.00	
2	PNM Labor for Permit Renewal Application Follow-Up Work	$85.00	120	1	$10,200.00	
3	Contractor Labor for Permit Renewal Application Follow-Up Work	$40,000.00	1	1	$40,000.00	
4	Miscellaneous - Non-Labor Costs	$10,000.00	1	1	$10,000.00	
						$120,200.00
	Routine Permit Fee for 2009					
	Annual NMED PC Business Fee for 2009				$ 4,000.00	
	Detail 2 Total:					$124,200.00

Detail 2a - NMED Permit Fees

The estimate below is based on the current NMED fee structure and an assumed number of permit actions over the life of the permit.

Activity	Number		Fee		Total For This Activity	
Class I Modifications	3	$	2,500.00	$	7,500.00	
Class II Modifications	2	$	6,000.00	$	12,000.00	
Class III Modifications	1	$	40,000.00	$	40,000.00	
Annual NMED PC Business Fee	2	$	4,000.00	$	8,000.00	
Hearing Fees	1	$	20,000.00	$	20,000.00	
						$ 87,500.00

Other Costs	Labor/Unit Rate	Hrs/item or 1 unit	Total For This Activity		
Labor for Class I Mods (24hr x 3)	$85.00	72	$	6,120.00	
Labor for Class II Mods (48hr x 2)	$85.00	96	$	8,160.00	
Labor for Class III Mods (120hr x 1)	$85.00	120	$	10,200.00	
Contractor Labor for PC Certification	$4,000.00	1	$	4,000.00	
					$ 28,480.00

Detail 2a Total: $ 115,980.00

Note: Line 9 only shows two annual fees because the annual fee is included once in the increased sampling to demonstrate attainment activity (Detail 1) and once on Detail 2.

Detail 3
CAD - Shallow Groundwater Corrective Action Program - Equipment Costs

Assumed Average Labor Rate For All Hourly Activities: $85.00

Line Item	Description	Labor or Unit Rate	Hrs/item or 1 Unit	Items Per Year	Annual Cost ($)
1	Plugging and Abandonment of 2 in. Shallow Wells	$1,000.00	15	1	$15,000.00
2	Plugging and Abandonment of 4 in. Shallow Wells	$1,500.00	20	1	$30,000.00
3	Plugging and Abandonment of 4 in. Deep Wells	$2,500.00	3	1	$7,500.00
4	Plugging and Abandonment of Cluster Wells	$10,000.00	7	1	$70,000.00
5	Plugging and Abandonment of PSMW-25, PSMW-26, EW-1, EW-2, EW-3, EW-4, EW-5, and VEW	$4,000.00	8	1	$32,000.00
6	Additonal/Replacement Extraction Wells	$20,000.00	2	1	$40,000.00
7	Engineering Design/Piping and Trenching to GWTP for Future Extraction Wells	$4,000.00	2	1	$8,000.00
	Detail 3 Total:				$202,500.00

Detail 4
CAP For Shallow Groundwater - Annual Operation and Maintenance Costs

Assumed Average Labor Rate For All Hourly Activities: $85.00

Line Item	Description	Labor or Unit Rate	Hrs/item or 1 Unit	Items Per Year	Annual Cost ($)	Group Subtotal ($)
	Groundwater Treatment System - Operation					
1	Utilities	$350.00	1	12	$4,200.00	
2	Compliance Sampling - 8021 Analysis, 5/month	$105.00	5	12	$6,300.00	
4	Compliance Sampling - Labor	$85.00	3	12	$3,060.00	
5	Routine Inspections	$85.00	1	26	$2,210.00	
6	Data Review and Evaluation	$85.00	2	12	$2,040.00	
7	Compliance Reporting	$85.00	8	2	$1,360.00	
8	Administration	$85.00	16	1	$1,360.00	
9	Training	$1,500.00	1	1	$1,500.00	
10	Miscellaneous (chemicals and supplies, carbon)	$2,500.00	1	6	$15,000.00	
						$37,030.00
	Groundwater Treatment System - Maintenance					
11	Routine Maintenance - Labor	$85.00	8	12	$8,160.00	
12	Routine Maintenance - Equipment, Parts, Etc.	$10,000.00	1	1	$10,000.00	
						$18,160.00
	Detail 4 Total:					$55,190.00

Detail 5
CAD - Deeper Groundwater Assessment Program, Completion Costs

The RCRA Post Closure Care Permit issued by the NMED in 2000 approves the deeper groundwater assessment findings.
Consequently, it is unlikely that any additional assessment work will required for the deeper groundwater.

CAD Deeper Groundwater Assessment Completion:	$0.00

Detail 6
CAD - Deeper Groundwater Corrective Action Program - Installation Costs

Currently, PNM is assuming that no engineered remediation program will be needed. Contaminant levels will be monitored only. Monitoring costs are shown in Detail 1c.

CAD - Deeper Groundwater Corrective Action Program - Installation Costs:	$0.00

Detail 7

CAD - Deeper Groundwater Corrective Action Program - Annual Operation Costs

Currently, PNM is assuming that no engineered remediation program will be needed. Contaminant levels will be monitored only. Monitoring costs are shown in Detail 1.

CAD - Deeper Plume Corrective Action Program - Annual Operation Costs:	$0.00

Attachment 3
Financial Assurance

PNM Resources
Alvarado Square
Albuquerque, NM 87158-2104
www.pnmresources.com
505.241.2031
fx: 505.241.2384

March 30, 2009

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. John Kieling
RCRA Permits Program Manager
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505

RE: Person Generating Station (NMT 360010342) – Updated Financial Assurance Information

Dear Mr. Kieling:

Pursuant to 40 CFR 264.145(f)(5), Public Service Company of New Mexico (PNM) is submitting the following items as required under 40 CFR 264.145(f)(3) for the Person Generating Station.

- A signed letter from PNM's Chief Financial Officer.
- An independent financial auditor's report.

If you have any questions, please contact me at (505) 241-2014.

Sincerely,

John Hale, P.E.
Technical Project Manager

Enclosures

Cc: Dipa Maji – MS 1120

PNM Resources
Alvarado Square
Albuquerque, NM 87158
www.pnmresources.com

PNM Resources

March 20, 2009

New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Attention: John Kieling
RCRA Permits Program Manager

Gentlemen:

I am the Chief Financial Officer of Public Service Company of New Mexico ("PNM"). This letter is in support of this firm's use of the financial test to demonstrate financial assurance for closure and/or post-closure costs, as specified in subpart H of 40 CFR parts 264 and 265.

1. This firm is the owner or operator of the following facilities for which financial assurance for closure or post-closure care is demonstrated through the financial test specified in subpart H of 40 CFR parts 264 and 265. The current closure and/or post-closure cost estimates covered by the test are shown for each facility:

EPA Identification Number: NMT-360010342

Name: Public Service Company of New Mexico
Person Generating Station

Address: Broadway Boulevard and Rio Bravo Boulevard
Albuquerque, NM

Current Post-Closure Care Cost Estimate: $1,018,580

2. This firm guarantees, through the guarantee specified in subpart H of 40 CFR parts 264 and 265, the closure or post-closure care of the following facilities owned or operated by the guaranteed party. The current cost estimates for the closure or post-closure care so guaranteed are shown for each facility: **None**. The firm identified above is: **Not Applicable**.

3. In States where EPA is not administering the financial requirements of subpart H of 40 CFR part 264 or 265, this firm, as owner or operator or guarantor, is demonstrating financial assurance for the closure or post-closure care of the following facilities through the use of a test equivalent or substantially equivalent to the financial test specified in subpart H of 40 CFR parts 264 and 265. The current closure and/or post-closure cost estimates covered by such a test are shown for each facility: **None**.

4. This firm is the owner or operator of the following hazardous waste management facilities for which financial assurance for closure or, if a disposal facility, post-closure care, is not demonstrated either to EPA or a State through the financial test or any other financial assurance mechanism specified in subpart H of 40 CFR parts 264 and 265 or equivalent or substantially equivalent State mechanisms. The current closure and/or post-closure cost estimates not covered by such financial assurance are shown for each facility: **None**.

5. This firm is the owner or operator of the following UIC facilities for which financial assurance for plugging and abandonment is required under part 144. The current closure cost estimates required by 40 CFR 144.62 are shown for each facility: **None**.

This firm is required to file a Form 10-K with the Securities and Exchange Commission ("SEC") for the latest fiscal year.

The fiscal year of this firm ends on December 31. The figures for the following items marked with an asterisk (*) are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended **December 31, 2008**.

Alternative II

1. Sum of current closure and post-closure cost estimates [total of all cost estimates shown in the five paragraphs above]: **$1,018,580**
2. Current bond rating of most recent issuance of this firm (**$350 million 7.95% Senior Unsecured Notes Due 2018)** and name of rating service:

   Baa3 (Moody's Investors Service)

3. Date of issuance of bond: **May 8, 2008**

4. Date of maturity of bond: **May 15, 2018**

*5. Tangible net worth [if any portion of the closure and post-closure cost estimates is included in "total liabilities" on your firm's financial statements, you may add the amount of that portion to this line]: **$1,289,807,284.**

*6. Total assets in U.S. (required only if less than 90% of firm's assets are located in the U.S.): **Not required; more than 90% of firm's assets are located in the U.S.**

*7. Is line 5 at least $10 million? **Yes**
*8. Is line 5 at least 6 times line 1? **Yes**

*9. Are at least 90% of firm's assets located in the U.S.? If not, complete line 10: **Yes**

10. Is line 6 at least 6 times line 1? **Not Applicable**

I hereby certify that the wording of this letter is identical to the wording specified in 40 CFR 264.151(f) as such regulations were constituted on the date shown immediately below.

Very truly yours,

PUBLIC SERVICE COMPANY
OF NEW MEXICO

By _____
Name: Charles N. Eldred
Title: Executive Vice President and Chief Financial Officer

Date 3-20-2009

cc: John Hale, Jr.

sls1375

Deloitte

Deloitte & Touche LLP
JPMorgan Chase Tower
2200 Ross Avenue, Suite 1600
Dallas, TX 75201-6778
USA

Tel: +1 214 840 7000
www.deloitte.com

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM ON APPLYING AGREED-UPON PROCEDURES

To the Board of Directors and Stockholder of
Public Service Company of New Mexico
Albuquerque, New Mexico

We have performed the procedures included in the Code of Federal Regulations (CFR) Title 40, Part 264, Section 145 (40 CFR 264.145), which were agreed to by the New Mexico Environment Department Hazardous Waste Bureau and Public Service Company of New Mexico and subsidiaries (the "Company"), solely to assist the specified parties in evaluating the Company's compliance with the financial test option as of December 31, 2008, included in the accompanying letter dated March 20, 2009 from Charles N. Eldred, Executive Vice President and Chief Financial Officer of the Company. Management is responsible for the Company's compliance with those requirements. This agreed-upon procedures engagement was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants, as adopted by Public Company Accounting Oversight Board (United States). The sufficiency of these procedures is solely the responsibility of the parties specified in this report. Consequently, we make no representation regarding the sufficiency of the procedures described below either for the purpose for which this report has been requested or for any other purpose.

The procedures that we performed and related findings are as follows:

1. We recomputed the amount included in item 5 under the caption Alternative II, Tangible net worth, in the letter referred to above, as the line item entitled "Total common stockholder's equity" less the line item entitled "Goodwill" in the audited consolidated financial statements of the Company as of and for the year ended December 31, 2008, on which we have issued our report dated March 2, 2009 (which report expresses an unqualified opinion and includes an explanatory paragraph regarding the adoption of Statement of Financial Accounting Standards No. 123 (revised 2004), *Share-Based Payment* and Statement of Financial Accounting Standards No. 158, *Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans - an amendment of FASB Statements No. 87, 88, 106, and 132R* in 2006, Financial Accounting Standards Board Financial Interpretation No. 48, *Accounting for Uncertainty in Income Taxes* in 2007, and Statement of Financial Accounting Standards No. 157, *Fair Value Measurements* in 2008), and noted no difference.

2. We recomputed from, or reconciled to, the audited consolidated financial statements of the Company, the information included in item 6 and 9, under the caption Alternative II, in the letter referred to above and noted no differences.

We were not engaged to, and did not, perform an examination, the objective of which would be the expression of an opinion on the accompanying letter dated March 20, 2009. Accordingly, we do not express such an opinion. Had we performed additional procedures, other matters might have come to our attention that would have been reported to you.

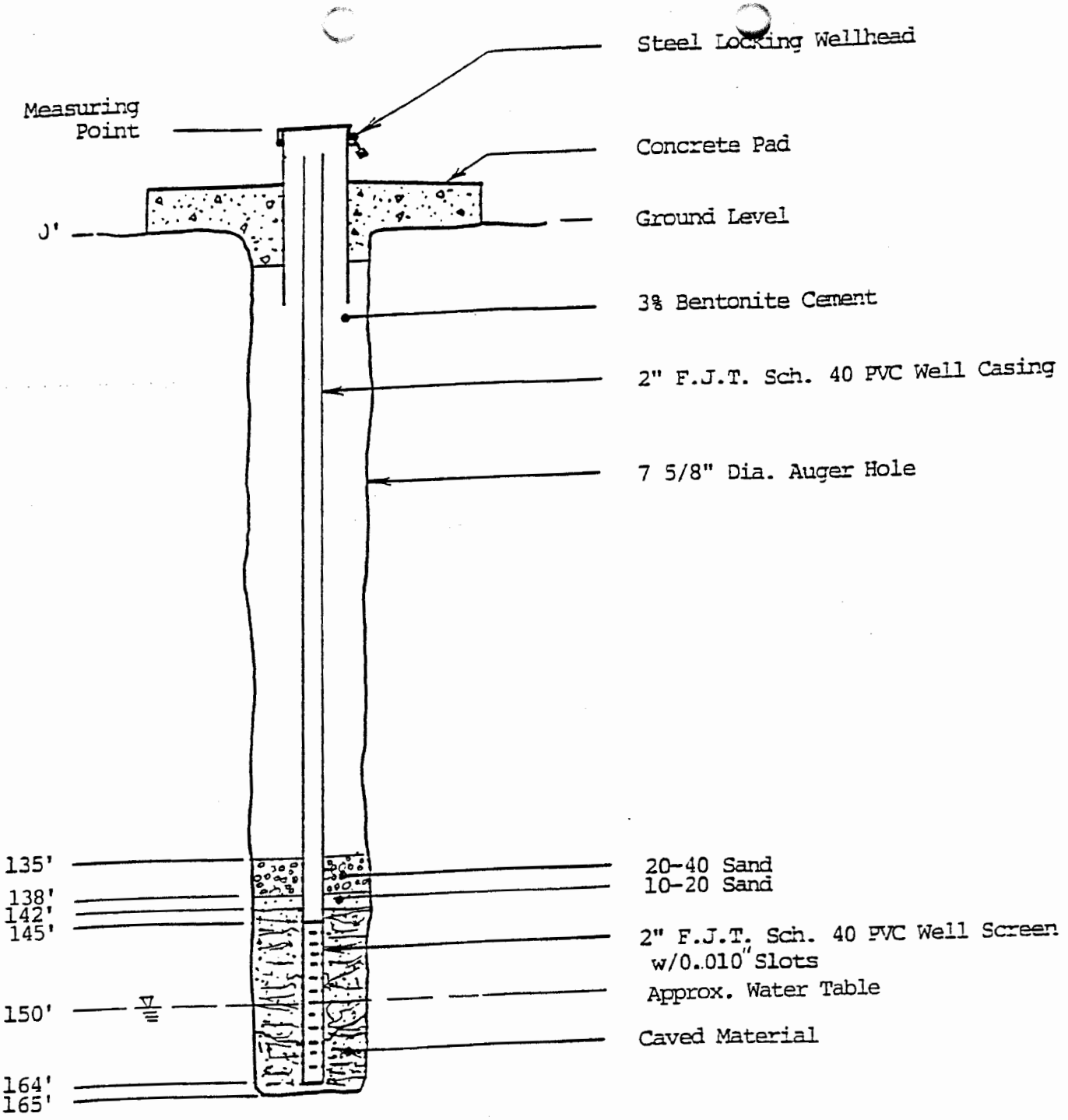
This report is intended solely for the information and use of the New Mexico Environment Department Hazardous Waste Bureau and management of the Company, and is not intended to be and should not be used by anyone other than these specified parties.

Deloitte & Touche LLP

March 20, 2009

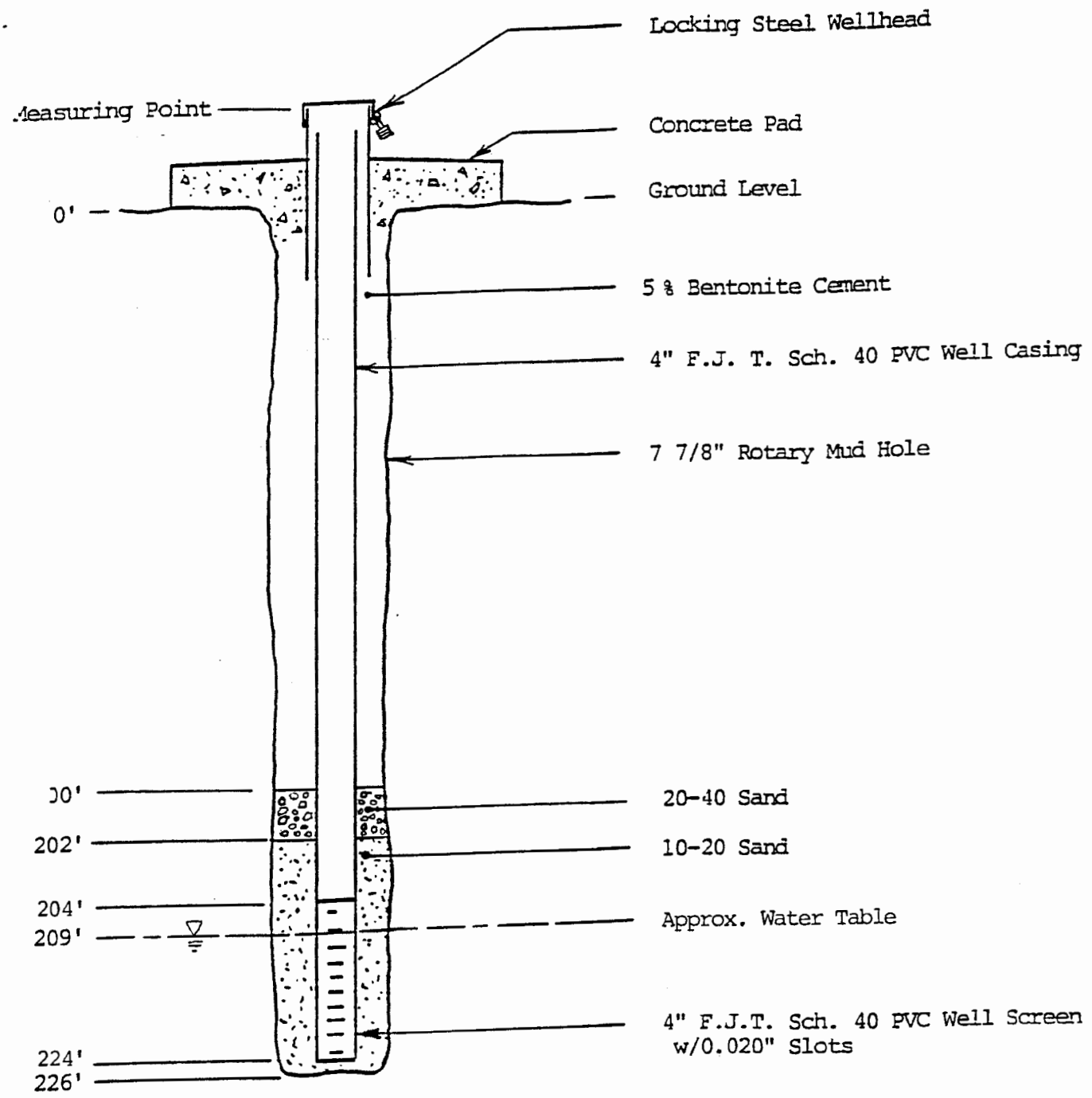
Appendix C
Groundwater Monitoring
(well completion information, historical data, and analyses)

Well Completion Information



CONSTRUCTION DIAGRAM

PSMW-11



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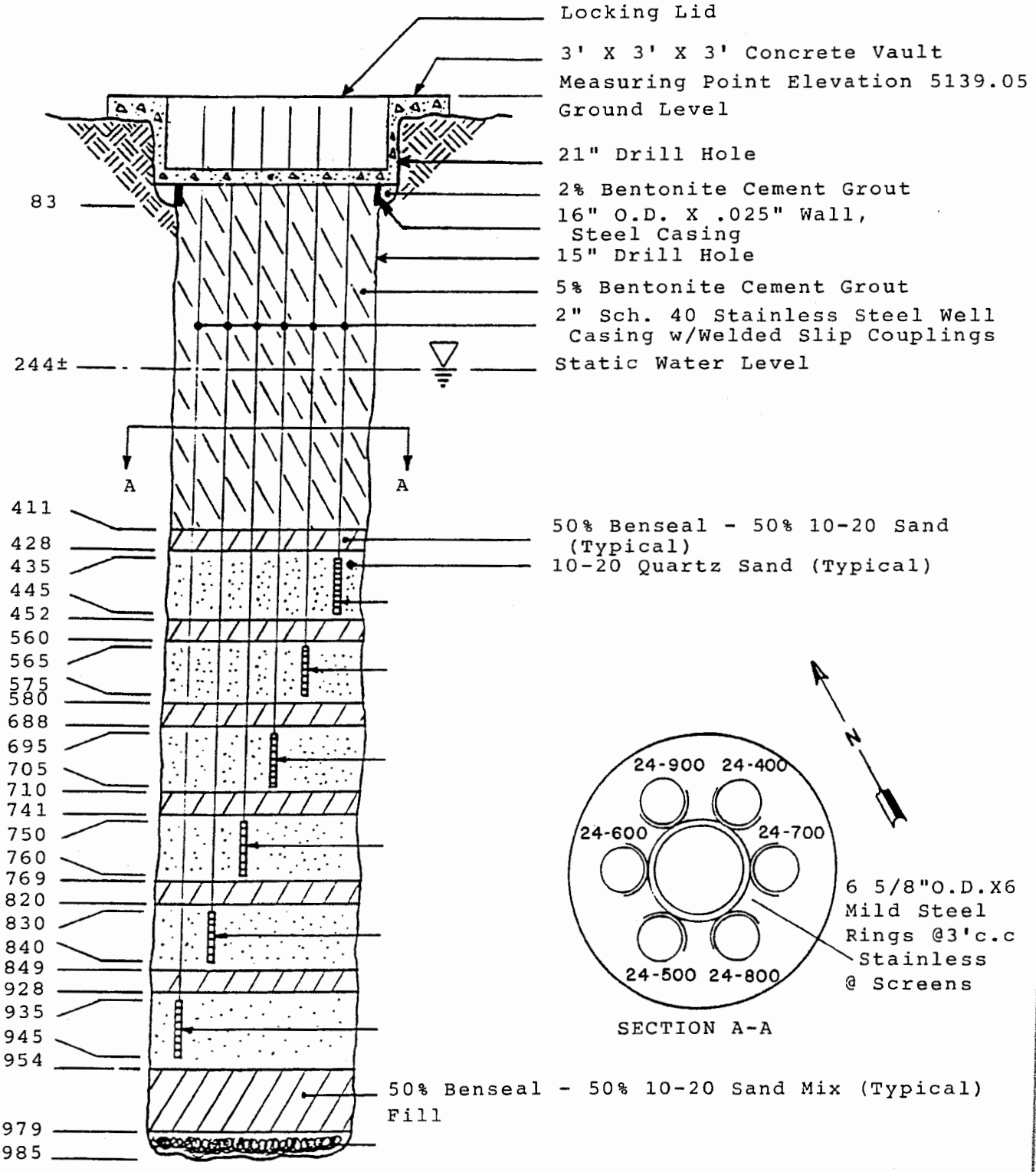
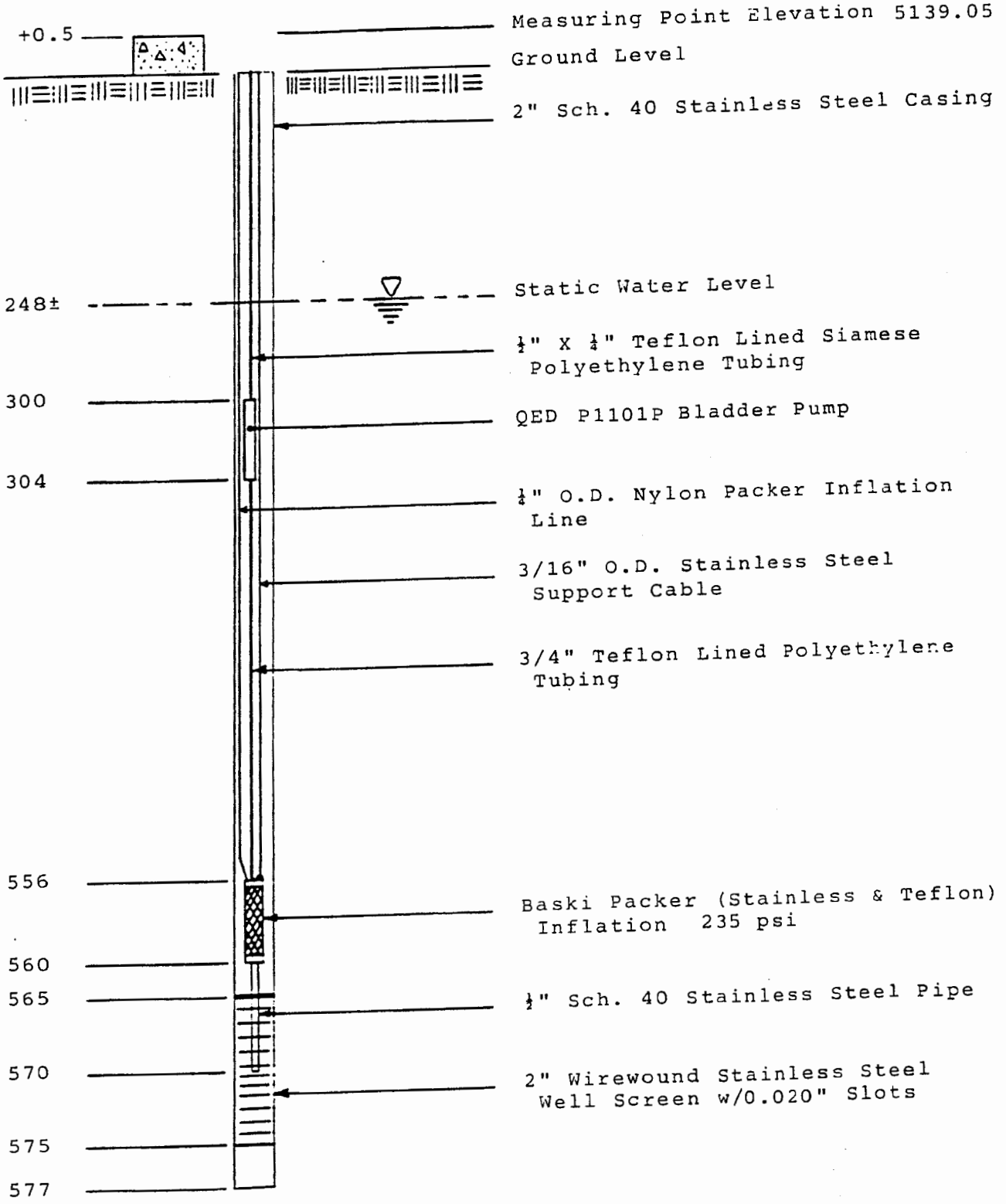
PSMW-20



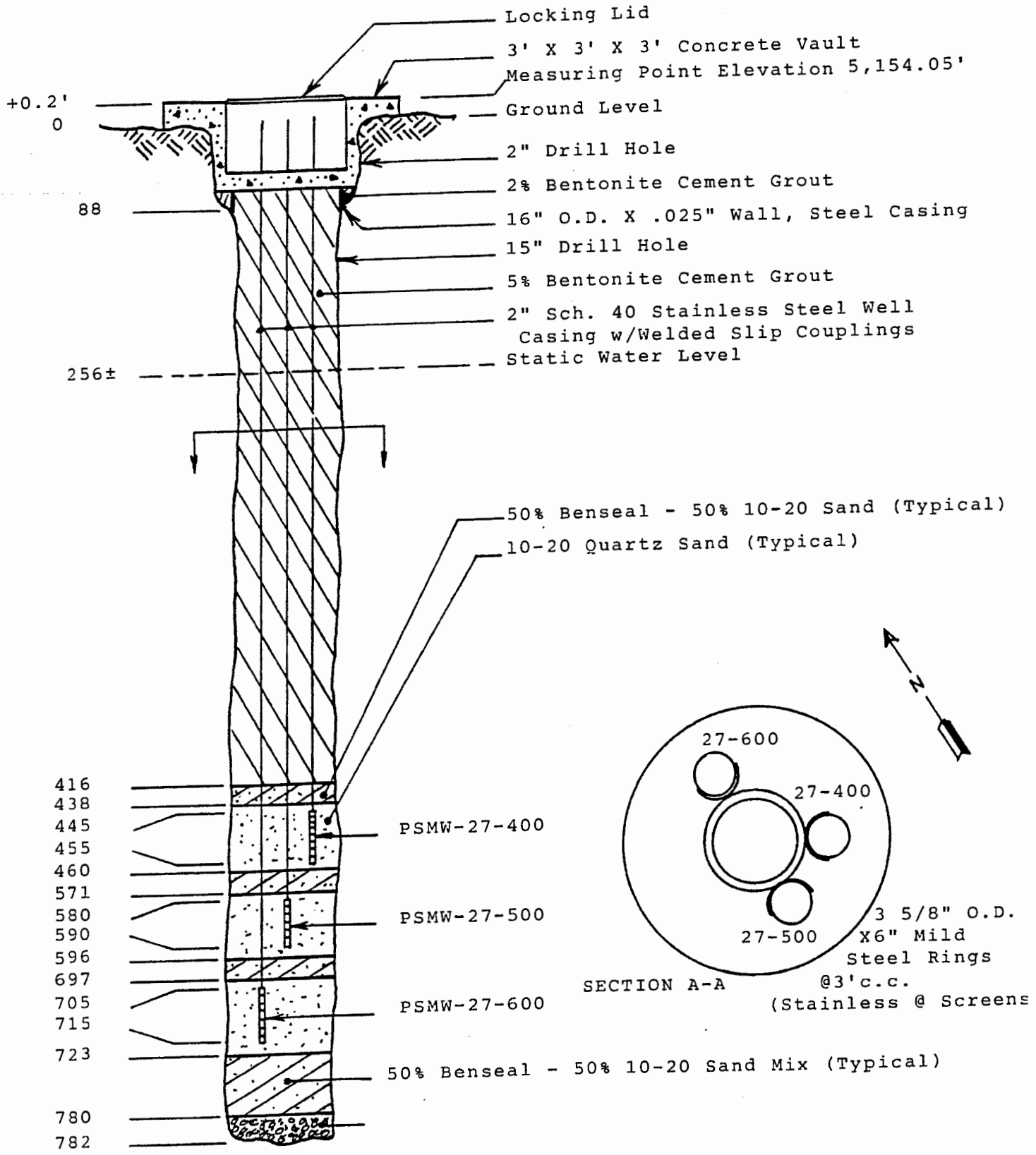
PSMW-24-CLUSTER

WELL CONSTRUCTION DIAGRAM



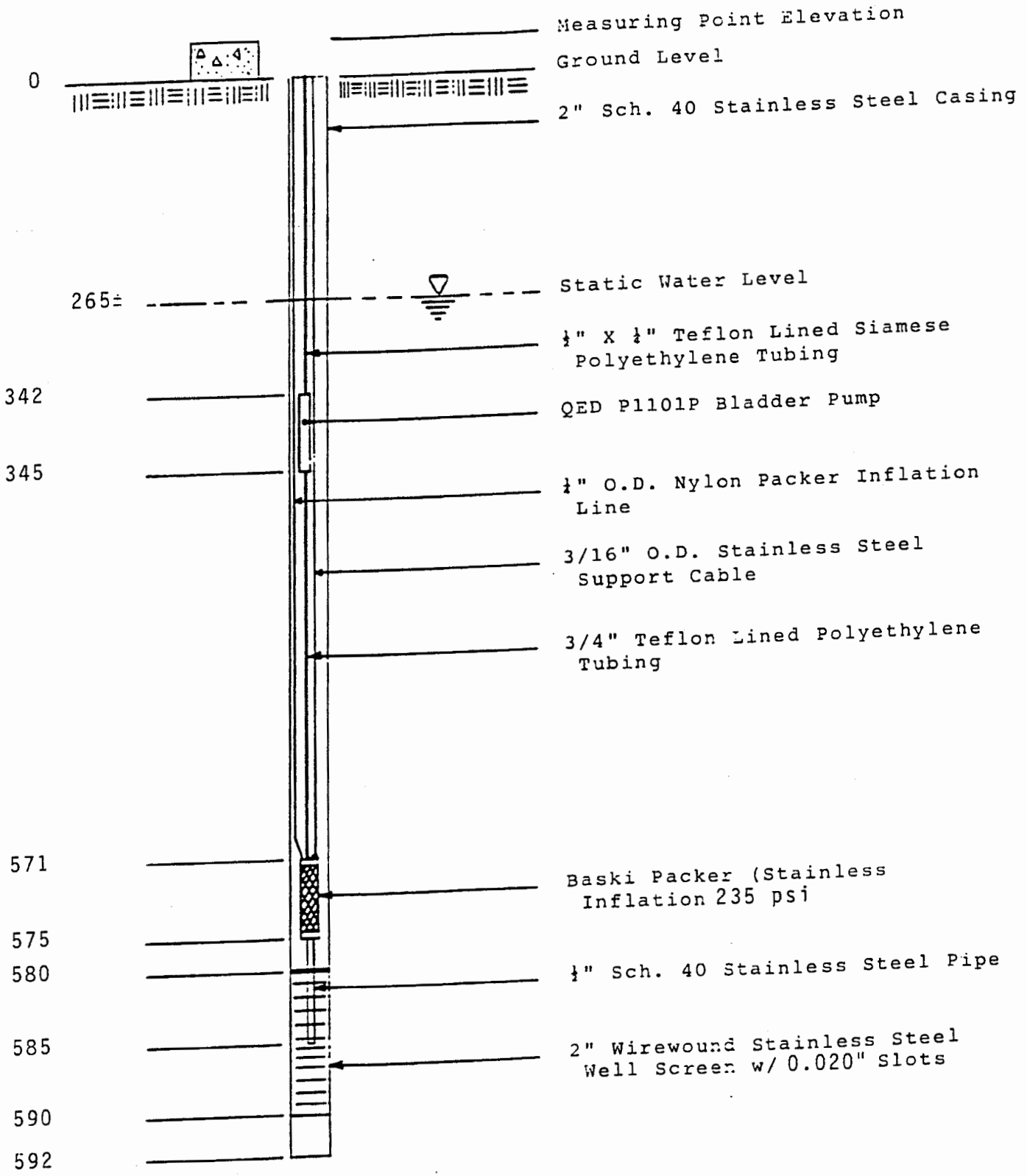
PSMW-24-500

PUMP INSTALLATION DIAGRAM



PSMW-27-CLUSTER

WELL CONSTRUCTION DIAGRAM



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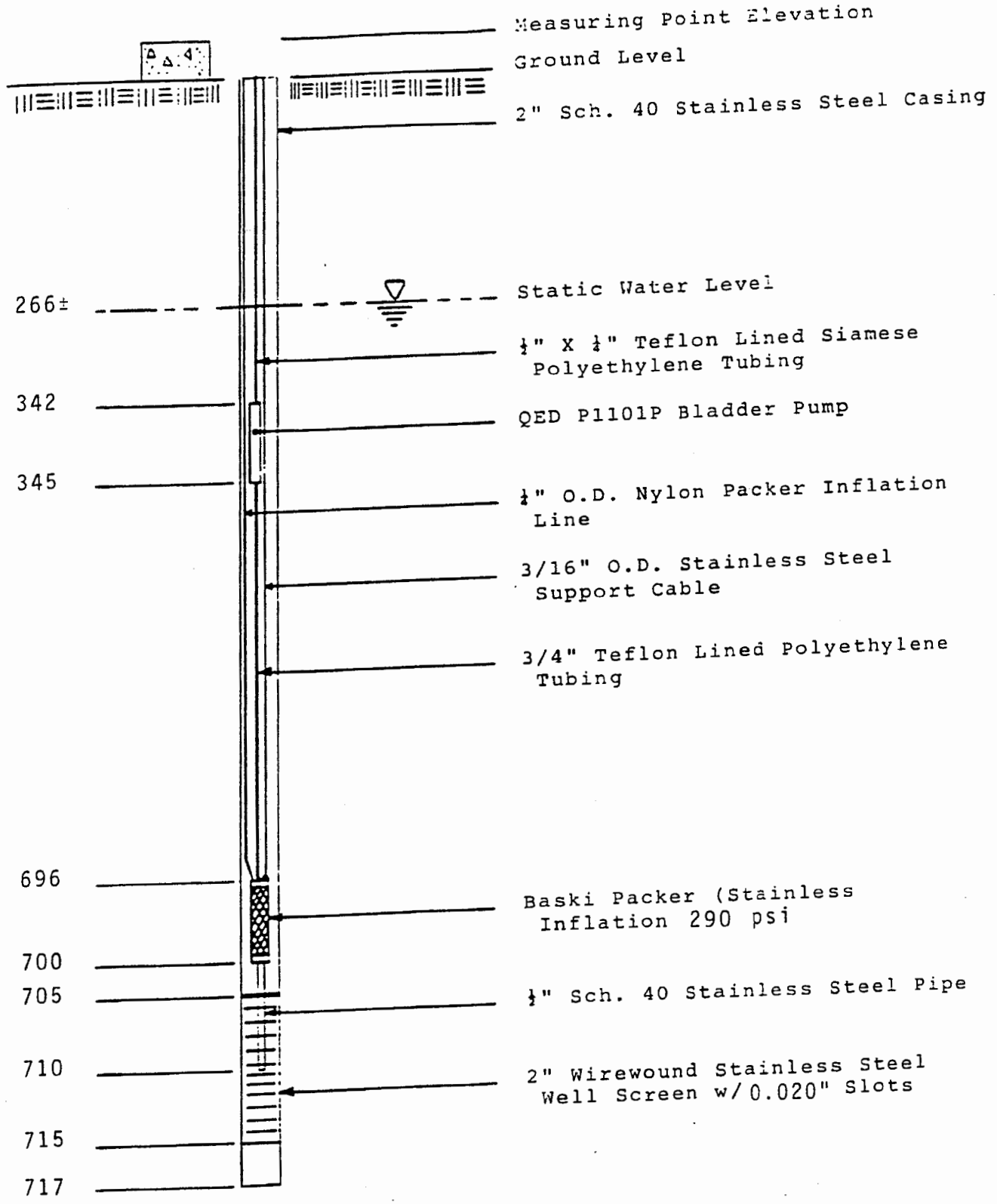

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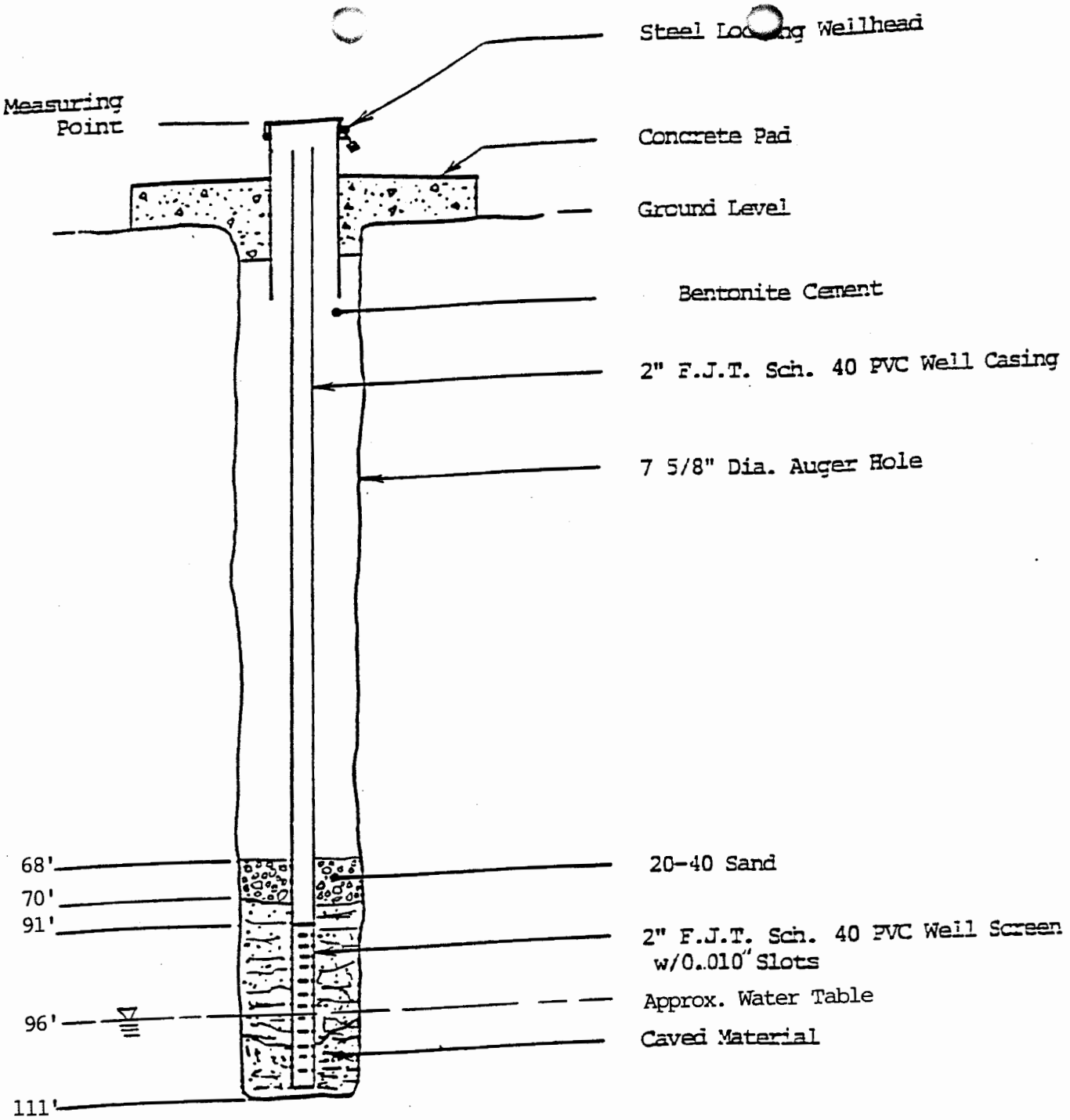

CONSTRUCTION DIAGRAM

PSMW-37

Appendix C
List of Figures

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Appendix C
List of Figures (continued)

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Historical Data Figures

Mann-Kendall Trend Analysis

Appendix D
2000 Permit (NMT 360010342), Proposed Changes

TABLE OF CONTENTS

MODULE 1 - GENERAL PERMIT CONDITIONS

MODULE II - GENERAL FACILITY CONDITIONS

MODULE III - POST CLOSURE CARE

MODULE IV - CORRECTIVE ACTION

~~APPENDICES~~

MODULE I - GENERAL PERMIT CONDITIONS AND REQUIREMENTS

I.A. EFFECT OF PERMIT

The Secretary of the New Mexico Environment Department (the Secretary) issues this Post-Closure Care Permit (the Permit) to the Public Service Company of New Mexico (PNM), the owner and operator of the Person Generating Station site (the Site) (EPA ID Number NMT 360010342). This Permit authorizes PNM (the Permittee) to perform the Corrective Action Program and to treat hazardous waste at the Site, and establishes the general and specific standards for these activities, pursuant to the New Mexico Hazardous Waste Act (HWA), NMSA 1978, Sections 74-4-1 et seq., and the New Mexico Hazardous Waste Management Regulations, 20.4.1.100 NMAC et seq.

Compliance with this Permit during its term shall constitute compliance, for purposes of enforcement, with Subtitle C of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6901 et seq., the HWA, and their implementing regulations, except as otherwise specified at 20.4.1.900 NMAC (incorporating 40 CFR §270.4(a)). Compliance with this Permit shall not constitute a defense to any order issued or any action brought under Sections 74-4-10, 74-4-10.1, or 74-4-13 of the HWA; Sections 3008(a), 3008(h), 3013, 7002(a)(1)(B), or 7003 of RCRA; Sections 104, 106 (a), 107, or 196(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9601 et seq.; or any other law providing for protection of public health or the environment. This Permit does not convey any property rights or any exclusive privilege, nor authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local laws or regulations. [20.4.1.900 NMAC (incorporating 40 CFR 270.4 and 270.30(g))]

This Permit consists of Permit Modules I through IV and the April 2009 Permit Application ~~Volumes 1 through 5~~. The Permit Application is incorporated herein by reference and made an enforceable part of this Permit. The Permittee shall comply with the post-closure care, corrective action, and other activities and standards specified in the Permit Modules and the Permit Application.

I.B. PERMIT ACTIONS

I.B.1. Permit Modification, Suspension, and Revocation

This Permit may be modified, suspended, and/or revoked for cause, as specified in Section 74-4-4.2 of the HWA and 20.4.1.900 and 20.4.1.901.B. NMAC (incorporating 40 CFR 270.41, 270.42, and 270.43). The filing of a request for a Permit modification, suspension, or revocation, or the notification of planned changes or anticipated noncompliance on the part of the Permittee, does not stay the applicability or enforceability of any Permit condition. [20.4.1.900 NMAC (incorporating 40 CFR 270.4(a) and 270.30(f))]

I.B.2. Permit Renewal

The Permittee may renew this Permit by submitting an application for a new permit at least 180 days before the expiration date of this Permit, in accordance with 20.4.1.900 and 20.4.1.901 NMAC (incorporating 40 CFR 270.10(h) and 270.30(b)) and Permit Condition I.E.3. In reviewing any application for a Permit renewal, the Secretary shall consider improvements in the state of control and measurement technology and changes in applicable regulations. [20.4.1.900 NMAC (incorporating 40 CFR 270.30(b))]

I.C. SEVERABILITY

The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby.

I.D. DEFINITIONS

Unless otherwise expressly provided herein, the terms used in this Permit shall have the meaning set forth in the HWA, RCRA, and/or their implementing regulations.

"Area of Concern (AOC)" means any area that may have a release of hazardous waste or hazardous constituents, which is not a solid waste management unit (SWMU), and which the Secretary determines may pose a threat to human health or the environment.

"Corrective Action Program" means all work undertaken to clean up and monitor ~~soil and~~ groundwater contamination at the Site, ~~including the Corrective Action Program, Plan, and requirements for soil, and the Corrective Action Programs, Plans, and requirements for groundwater specified~~included in the Permit Application ~~Volumes 3, 4, and 5~~as the post-closure care plan and these Permit modules, and the groundwater monitoring programs specified in Permit Application ~~Volumes 4 and 5~~ and Permit Modules I through IV.

"Facility" means the Person Generating Station site owned by the Public Service Company of New Mexico and located in the South Valley of Albuquerque, on approximately 22 acres northeast of Broadway Boulevard and Rio Bravo Boulevard, EPA ID No. NMT 360010342.

"Hazardous Constituent" means any constituent identified in 20.4.1.200 NMAC (incorporating 40 CFR Part 261, Appendix VIII), any constituent identified in 20.4.1.500 NMAC (incorporating 40 CFR Part 264, Appendix IX), any constituent identified in a hazardous waste listed in 20.4.1.200 NMAC (incorporating 40 CFR Part 261, Subpart D), or any constituent identified in a toxicity characteristic waste in 20.4.1.200 NMAC (incorporating 40 CFR 261.24, Table 1).

"HWA" means the New Mexico Hazardous Waste Act, NMSA 1978, §§74-4-1 et seq. (Repl. Pamp. 1993).

"MCLs" means Maximum Contaminant Levels under the Federal Safe Drinking Water Act, 42 U.S.C. §§300f et seq., and regulations promulgated thereunder.

"Permit Application" means ~~Volume 1 through 5~~the ~~June 2007~~April 2009 application submitted by PNM and all modifications or revisions received by the New Mexico Environment Department (NMED) Hazardous Waste Bureau (HWB) as of ~~May 30, 2000~~the date of this permit.

"Permittee" means the Public Service Company of New Mexico.

"RCRA" means the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq.

"Regional Administrator" means the Regional Administrator of EPA Region 6, or designee or authorized representative.

"Secretary" means the Secretary of NMED or designee.

"Site" means the land, including the subsurface and groundwater, consisting of an area including the Facility and the land, including the subsurface and groundwater, in the vicinity of the Facility, where any hazardous waste or hazardous constituents originating from the Facility come to be located.

"Solid Waste Management Unit" or "SWMU" means any discernible unit or area at which solid waste has been placed at any time, and from which the Secretary determines there may be a risk of a release of hazardous constituents, irrespective of whether the unit or area was intended for the management of solid or hazardous waste. Placement of solid waste includes one time and accidental events that were not remediated, as well as any unit or area at which solid waste has been routinely and systematically placed.

"WQCC standards" means the maximum allowable ground water contaminant concentrations listed at 20 NMAC 6.2.3103 and 6.2.4103.

I.E. DUTIES AND REQUIREMENTS

I.E.I. Duty to Comply

The Permittee shall comply with all conditions and requirements of this Permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit as specified in 20.4.1.900 NMAC (incorporating 40 CFR 270.61). Any noncompliance with any condition or requirement of this Permit, other than under the terms of an emergency permit, constitutes a violation of the HWA and/or RCRA and may subject the Permittee, its successors and assigns, officers, directors, employees, parents, or subsidiaries to an administrative or civil enforcement action, including civil penalties and injunctive relief, under Sections 74-4-10 or 74-4-10.1 of the HWA or Section 3008(a) and (g) or 3013 of RCRA; Permit modification, suspension, revocation, or denial of a permit application or modification request under Section 74-4-4.2 of the HWA; citizen

suit under Section 7002(a) of RCRA; criminal penalties under Section 74-4-11 of the HWA or Section 3008(d), (e), and (f) of RCRA; or some combination of the foregoing. [20.4.1.900 NMAC (incorporating 40 CFR 270.30(a))]

I.E.2. Permit Term

This Permit shall be effective for ten years from its effective date. [20.4.1.900 NMAC (incorporating 40 CPR 270.50(a))]

I.E.3. Duty to Reapply

If the Permittee will continue an activity allowed or required by this Permit after the expiration date of this Permit, the Permittee shall submit a complete application for a new Permit at least 180 days before this Permit expires, in accordance with all applicable laws, unless an extension is granted by the Secretary. [20.4.1.900 NMAC (incorporating 40 CFR 270.10(h) and 270.30(b))]

I.E.4. Permit Expiration

This Permit and all conditions herein will remain in effect beyond the Permit's expiration date, if the Permittee has submitted a timely, complete application for renewal of this Permit 180 days prior to the expiration date of this Permit, in accordance with 20.4.1.900 NMAC (incorporating 40 CFR 270.10 and 270.13 through 270.29) and, through no fault of the Permittee, the Secretary has not issued a new Permit on or before the expiration date of this Permit. [20.4.1.900 NMAC (incorporating 40 CFR 270.10(h) and 270.51)]

I.E.5. Duty to Mitigate

In the event of noncompliance with this Permit, the Permittee shall take all reasonable steps to minimize releases to the environment and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment. [20.4.1.900 NMAC (incorporating 40 CFR 270.30(d))]

I.E.6. Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control and related appurtenances which are installed or used by the Permittee to achieve compliance with the conditions and requirements of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance/quality control procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions and requirements of this Permit. [20.4.1.900 NMAC (incorporating 40 CFR 270.30(e))]

I.E.7. Duty to Provide Information

The Permittee shall furnish to the Secretary, within a reasonable time period specified by the Secretary, any relevant information which the Secretary requests to determine whether cause exists for modifying, suspending, or revoking this Permit, or to determine compliance with this Permit. The Permittee shall also furnish to the Secretary, upon request, copies of any records required to be kept by this Permit. [20.4.1.500 and 20.4.1.900 NMAC (incorporating 40 CFR 264.74(a) and 270.30(h))]

I.E.8. Inspection and Entry

The Permittee shall allow the Secretary, or authorized representatives, upon the presentation of credentials:

a. Entrance to Premises - to enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;

b. Access to Records - to have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;

c. Inspection - to inspect, at reasonable times, any Facility equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and

d. Sampling - to sample or monitor, at reasonable times, for the purposes of assuring Permit compliance or as otherwise authorized by the HWA and/or RCRA, any substances or parameters at any location. [20.4.1.900 NMAC (incorporating 40 CFR 270.30(i))]

Permit Condition I.E.8. shall not be construed to limit, in any manner, the Secretary's authority under Section 74-4-4.3. of the HWA or other applicable law.

I.E.9. Reporting Requirements

a. Reporting Planned Changes - The Permittee shall give notice to the Secretary, as soon as possible, of any planned physical alterations or additions to the Facility. [20.4.1.900 NMAC (incorporating 40 CFR 270.30(l)(1))]

b. Reporting Anticipated Noncompliance - The Permittee shall give advance notice to the Secretary of any planned changes in the permitted Facility or activity which may result in noncompliance with Permit conditions or requirements. [20.4.1.900 NMAC (incorporating 40 CFR 270.30(l)(2), and (10))]

c. Other Noncompliance - The Permittee shall report all instances of noncompliance with Permit conditions and requirements not reported under Permit Conditions I.E.9.a. and b. above and II.F.2. below at the time monitoring reports are submitted under Permit Condition IV.A.2.a.iv.(h) below.

I.E.10. Other Information

Whenever the Permittee becomes aware that it failed to submit any relevant facts or submitted incorrect information in any document submitted to the Secretary, the Permittee shall promptly submit the corrected facts or information in writing to the Secretary. [20.4.1.900 NMAC (incorporating 40 CFR 270.30 (l)(11))]

I.E.11. Transfer of Permits

The Permittee shall not transfer this Permit to any person except after notice to the Secretary. The Secretary shall require modification or revocation and reissuance of this Permit, as specified by 20.4.1.900 and 20.4.1.901 NMAC (incorporating 40 CFR 270.40(b) and 270.41(b)(2)), to identify the new Permittee and incorporate such other requirements as may be necessary under the HWA and RCRA and implementing regulations. Before transferring ownership or operation of the Facility, the Permittee shall notify the new owner or operator in writing of all applicable requirements of 20 NMAC Chapter 4 and this Permit. [20.4.1.500 and 20.4.1.900 NMAC (incorporating 40 CFR 264.12(c) and 270.30(l)(3))]

I.F. SIGNATORY REQUIREMENT

The Permittee shall sign and certify, as specified in 20.4.1.900 NMAC (incorporating 40 CFR 270.11), all applications, reports required by this Permit, or information required by the Secretary. [20.4.1.900 NMAC (incorporating 40 CFR 270.30(k))].

I.G. REPORTS, NOTIFICATIONS, AND SUBMISSIONS TO THE SECRETARY

All reports, notifications, or other submissions which are required by this Permit to be submitted to the Secretary shall be sent by certified mail or hand delivered to:

Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2044A Galisteo Street
Santa Fe, NM 87505

I.H. CONFIDENTIAL INFORMATION

The Permittee may claim confidentiality for any information submitted to or requested by the Secretary or required by this Permit, to the extent authorized by Section 74-4-4.3(D) of the HWA and 20.4.1.900 NMAC (incorporating 40 CFR 270.12).

I.I. ENFORCEMENT

I.I.1. Waiver of Defenses

In any judicial action brought in New Mexico District Court for the First Judicial District under the HWA, or in the United States District Court for the District of New Mexico under RCRA (or under the HWA asserting supplemental jurisdiction under 28 U.S.C. § 1367), the Permittee waives all objections and defenses it may have to the jurisdiction of either such State or federal court or to venue in either such State or federal district.

I.I.3. Admissibility of Data

In any administrative or judicial action to enforce a condition of this Permit, the Permittee waives any objection to the admissibility as evidence of any data generated pursuant to this Permit.

MODULE II - GENERAL FACILITY CONDITIONS AND REQUIREMENTS

II.A. DESIGN AND OPERATION OF FACILITY

The Permittee shall construct, design, maintain, and operate the Facility to minimize the possibility of a fire, explosion, or any unplanned, sudden, or non-sudden release of hazardous waste constituents to air, soil, surface water, or groundwater which could threaten human health or the environment. [20.4.1.500 NMAC (incorporating 40 CFR 264.31)]

II.B. OFF-SITE WASTES

The Permittee shall not accept hazardous waste at the Facility from any off-site source.

II.C. SECURITY

The Permittee shall comply with the security provisions specified in 20.4.1.500 NMAC (incorporating 40 CFR 264.14(b)(2) and (c)) and in Permit Application ~~Volume 1,~~ Section 2.2 ~~2.7.2. and Attachment 31~~, in order to prevent unknowing or unauthorized entry onto the Site by persons or livestock.

II.D. GENERAL INSPECTION REQUIREMENTS

The Permittee shall implement the inspection schedule specified in Permit Application Section 2.3~~Volume 2, Sections 2.3 and 2.4~~. The Permittee shall remedy any deterioration or malfunction discovered by an inspection. The Permittee shall maintain records of inspection in accordance with Permit Application Section 2.5.1 ~~Volume 2, Section 2.3.~~, and Permit Condition II.F.4. below. [20.4.1.500 NMAC (incorporating 40 CFR 264.15]

II.E. PREPAREDNESS AND PREVENTION

II.E.1. Required Equipment

The Permittee shall maintain, at a minimum, the emergency equipment specified in Permit Application Section 2.4.1 ~~Volumes 3, 4, and 5, Sections 4~~, at the Facility. [20.4.1.500 NMAC (incorporating 40 CFR 264.32)]

II.E.2. Testing and Maintenance of Equipment

The Permittee shall test and maintain the equipment specified in Permit Application Sections 2.4.1 and 2.4.2 and Permit Condition II.E.1. above, on a periodic basis as necessary, to assure its proper operation in time of emergency. [20.4.1.500 NMAC (incorporating 40 CFR 264.33)]

II.E.3. Access to Communications and Alarm System

The Permittee shall maintain access to the communications and alarm system specified in Permit Application Section 2.4.3 ~~Volumes 3, 4, and 5, Sections 4~~. [20.4.1.500 NMAC (incorporating 40 CFR 264.34)]

II.E.4. Arrangements with Local Authorities

The Permittee shall maintain emergency arrangements with state and local authorities, as specified in Permit Application Section 2.4.4~~Volumes 3, 4, and 5, Sections 4.3 and 4.4~~. [20.4.1.500 NMAC (incorporating 40 CFR 264.37)]

II.F. RECORDKEEPING AND REPORTING

In addition to the recordkeeping and reporting requirements specified elsewhere in this Permit, the Permittee shall comply with the following requirements:

II.F.1. Operating Record

The Permittee shall maintain at the Facility, until the end of the post-closure care period or completion of corrective action, whichever is later, a written record of waste, soil, and groundwater analyses. The written operating record shall include all information listed in Permit Application Section 2.5.1 as required under 20.4.1.500 NMAC (incorporating 40 CFR 264.73(b)(5), (6), and (8)) and Permit Condition II.F.4. below. [20.4.1.500 NMAC (incorporating 40 CFR 264.73)]

II.F.2. Twenty-four Hour Reporting

a. The Permittee shall report orally to the Secretary any noncompliance or incident at the Facility or Site which may endanger human health or safety or the environment. Such report shall be made within 24 hours from the time the Permittee becomes aware of the circumstances and shall include (see Permit Application Section 2.5.2):

i. Information concerning the release of any hazardous waste or hazardous constituents which may endanger public drinking water supplies;

ii. Information concerning the release or discharge of any hazardous waste or hazardous constituents, or of a fire or explosion at the facility, which could threaten the environment or human health outside the facility. [20.4.1.900 NMAC (incorporating 40 CFR 270.30(l)(6)(i))]

b. The description of the occurrence and its cause shall include:

i. Name, address, and telephone number of the Permittee and the Facility;

ii. Date, time, and type of incident;

iii. Name and quantity of materials involved;

iv. The extent of injuries, if any;

v. An assessment of actual or potential hazards to the environment and human health outside the Facility; and

vi. Estimated quantity and disposition of recovered material that resulted from the incident. [20.4.1.900 NMAC (incorporating 40 CFR 270.30(l)(6)(ii))]

c. The Permittee shall also submit a written notice to the Secretary within five calendar days of the time the Permittee becomes aware of the circumstances under Permit Condition II.F.2.a. above. The written notice shall contain the following information:

i. a description of the noncompliance or incident and its cause;

ii. the period(s) of noncompliance or incident, including exact dates and times, and, if the noncompliance or incident has not been corrected, the anticipated time it is expected to be corrected; and

iii. steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, incident, or imminent hazard.

The Secretary may waive the five day written notice requirement in favor of a written report within 15 days. [20.4.1.900 NMAC (incorporating 40 CFR 270.30(l)(6)(iii)]

II.F.3. MONITORING RECORDS

a. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all recordings for continuous monitoring instrumentation, copies of all reports and records required by this Permit, records of all data used to complete the Permit Application, and records from all ground-water monitoring wells and associated ground-water surface elevations until, at a minimum, the later of the following dates (see Permit Application Section 2.5.1): 1) three years from the date of the sample, measurement, report, record, certification, or Permit Application, or 2) the date that post-closure care and corrective action are approved as complete by the

Secretary. The Secretary may extend these periods at any time, and these periods shall be automatically extended during the course of any unresolved enforcement action regarding the Facility. [20.4.1.500 and 20.4.1.900 NMAC (incorporating 40 CFR 264.74(b) and 270.30(j)(2))]

b. Records of monitoring information shall include:

i. The dates, exact place, and times of sampling or measurements;

ii. The individuals who performed the sampling or measurements;

iii. The dates analyses were performed;

iv. The laboratory and individuals who performed the analyses;

v. The quality assurance and quality control procedures used;

vi. The analytical techniques or methods used; and

vii. The results of such analyses. [20.4.1.900 NMAC (incorporating 40 CFR 270.30(j)(3))]

II.F.4. DOCUMENTS TO BE MAINTAINED AT THE FACILITY

The Permittee shall maintain at the Facility or the Permitte's Albuquerque, NM offices (as applicable and listed in the Permit Application Section 2.5.1), until post-closure care and corrective action are approved as complete by the Secretary, the following documents and all amendments, revisions, and modifications to these documents (see Permit Application Section 2.5.1):

a. This Permit and its Attachments, including Permit Application ~~Volumes 1 through 5, with the~~ Section 4 ~~Volume 2~~ Post-Closure Care Plan, as required by 20.4.1.500 NMAC (incorporating 40 CFR 264.118(a));

b. Inspection schedules and results, for three years from the date of the inspection, as required by 20.4.1.500 NMAC (incorporating 40 CFR 264.15(b)(2)) and this Permit (see Permit Application Sections 2.3 and 2.5.1);

c. Operating record, as required by 20.4.1.500 NMAC (incorporating 40 CFR 264.73) and this Permit (see Permit Application Section 2.5.1);

d. Annually-adjusted post-closure cost estimate, as required by 20.4.1.500 NMAC (incorporating 40 CFR 264.144(d)) and this Permit (see Permit Application Sections 2.5.1 and 2.8);

e. Groundwater monitoring analytical results and data contained in quarterly and annual reports required under Permit Conditions IV.A.2(~~hg~~)(ii) and (iii) below, for three years from the date of the report (see Permit Application Section 2.5.1);

f. Copies of manifests for any shipments off site of hazardous waste generated at the Site.

MODULE III - POST-CLOSURE CARE CONDITIONS AND REQUIREMENTS

III.A. MODULE HIGHLIGHTS

This Permit implements post-closure care requirements for ~~soil and~~ groundwater contamination left in place after closure of a RCRA-regulated unit, an unlined, below-grade dry well (referred to in the Permit Application as the "Unlined Well") used for disposal of RCRA-regulated hazardous waste. The ~~dry well~~Unlined Well was located at what is now the capped area, and consisted of a vertical, below-ground, open-ended, three and a half foot by ten foot pipe that received waste piped from a parts cleaning station. The waste consisted of waste oils and greases, kerosene, waste paint, paint thinners, turpentine, and various solvents, including a solvent with the active ingredients of 1,1,1 trichloroethane (1,1,1-TCA) and tetrachloroethene (PCE). The Unlined Well ~~dry well~~ was used from 1976 to 1983. Closure of the Unlined Well ~~dry well~~ was completed in January, 1988. A Post-Closure Care Permit, implementing post-closure care and corrective action requirements, was issued in August, ~~1988~~ 2000 and will expire~~d~~ in August, ~~1998~~2010. The terms of that Permit remain in effect until the effective date of this Permit. Post-closure care requirements shall remain in place for 30 years after closure, unless the post-closure period is shortened or lengthened pursuant to 20.4.1.500 NMAC (incorporating 40 CFR 264.117(a)(2)). The Corrective Action Program, incorporated into the Permit Application as the Post-Closure Care Plan, consists of monitoring and extraction wells and a groundwater treatment system consisting of ~~a tray aeration~~an activated carbon treatment unit, and is required to remain in place until completion of corrective action~~, i.e., demonstration of attainment of cleanup standards for three years and as otherwise~~ as required by Module IV of this Permit, pursuant to 20.4.1.500 NMAC (incorporating 40 CFR 264.96(c) and 264.100(f)).

III.B. GENERAL POST-CLOSURE REQUIREMENTS

III.B.1. Post-Closure Care Period

The Permittee shall comply with post-closure care requirements for 30 years after completion of closure of the RCRA-regulated unit, unless the Secretary approves shortening or lengthening the post-closure care period pursuant to 20.4.1.500 NMAC (incorporating 40 CFR 264.117(a)(2)). Post-closure care shall be in accordance with 20.4.1.500 NMAC (incorporating 40 CFR Part 264, Subpart G), and the Post-Closure Plan, Permit Application Section 4~~Volume 2~~, and shall be subject to the terms and conditions of this Permit. [20.4.1.500 NMAC (incorporating 40 CFR 264.117)]

The Permittee shall implement the Post-Closure Plan, Permit Application Section 4 ~~Volume 2~~. All post-closure care activities must be conducted in accordance with the provisions of the Post-Closure Plan. [20.4.1.500 NMAC (incorporating 40 CFR 264.117(d) and 264.118(b))]

III.C. POST-CLOSURE PROCEDURES AND USE OF PROPERTY

III.C.1. The Permittee shall operate the ground-water monitoring, extraction, and treatment ~~and corrective action~~ system of the ~~Corrective Action Program~~Post-Closure

Care Plan (see Permit Application Section 4) and shall comply with all other applicable requirements of 20.4.1.500 NMAC (incorporating 40 CFR Part 264, Subpart F), during the post-closure period. [20.4.1.500 NMAC (incorporating 40 CFR 264.117(a)(1))].

~~III.C.2. The Permittee shall comply with the requirements for landfills, pursuant to 20.4.1.500 NMAC (incorporating 40 CFR 264.310), and as follows:~~

~~a. Maintain the integrity and effectiveness of the final cover, including making repairs to the cap, as necessary, to correct the effects of settling, subsidence, erosion, or other events;~~

~~b. Prevent run-on and run-off from eroding or otherwise damaging the final cover; and~~

~~c. Protect and maintain surveyed benchmarks used in complying with the surveying and recordkeeping requirements of 20.4.1.500 NMAC (incorporating 40 CFR 264.309). [20.4.1.500 NMAC (incorporating 40 CFR 264.310(b))]~~

III.C.~~3~~2. The Permittee shall maintain security at the Facility during the post-closure care period, in accordance with the Post-Closure Plan ~~and all~~ security requirements specified in Permit Condition II.C. and Permit Application Section 2.2 ~~Volume 1, Section 2.7.2. and Attachment 31~~, and in accordance with 20.4.1.500 NMAC (incorporating 40 CFR 264.14). [20.4.1.500 NMAC (incorporating 40 CFR 264.117(b))]

III.C.~~4~~3. The Permittee shall not allow any use of the Facility which will disturb the RCRA cap at the Unlined Well or the ~~integrity of the final cover or the~~ function of the Facility's monitoring or groundwater corrective action systems during the post-closure care period, in accordance with 20.4.1.500 NMAC (incorporating 40 CFR 264.117(c)). [20.4.1.500 NMAC (incorporating 40 CFR 264.117(c))]

III.C.~~5~~4. The Permittee shall inspect the components, structures, and equipment at the Site in accordance with the requirements specified at Permit Condition II.D. and Permit Application Section 2.3 ~~Volume 2, Sections 2.3. and 2.4~~. [20.4.1.500 NMAC (incorporating 40 CFR 264.117(a)(1)(ii))]

III.D. NOTICES AND CERTIFICATION

III.D.1. If the Permittee wishes to move off site any hazardous waste, hazardous waste residue, or contaminated soils from the RCRA-regulated unit, then the Permittee shall request a modification to this Permit in accordance with the applicable requirements at 20.4.1.900 and 20.4.1.901 NMAC (incorporating 40 CFR Part 270). The Permittee shall demonstrate that the removal of hazardous waste is in compliance with all applicable HWA and RCRA requirements for generation and transport of hazardous waste. [20.4.1.500 NMAC (incorporating 40 CFR 264.119(c))]

III.D.2. No later than 60 days after completion of the established post-closure care period, the Permittee shall submit to the Secretary, by registered mail, a certification that post-closure care was performed in accordance with the specifications in the Post-Closure Plan. The certification must be signed by the Permittee and an independent, New Mexico registered professional engineer. Documentation supporting the independent, registered professional engineer's certification must be furnished to the Secretary upon request until the Secretary releases the Permittee from the financial assurance requirements for post-closure care under 20.4.1.500 NMAC (incorporating 40 CFR 264.145(1)). [20.4.1.500 NMAC (incorporating 40 CFR 264.120)]

III.E. FINANCIAL ASSURANCE

The Permittee shall implement and maintain financial assurance (see Permit Application Section 2.9 and Attachment 3) and comply with all applicable requirements of 20.4.1.500 NMAC (incorporating 40 CFR Part 264, Subpart H), during the post-closure period. The Permittee shall demonstrate continuous compliance with financial assurance requirements by providing documentation of financial assurance in compliance with 20.4.1.500 NMAC (incorporating 40 CFR 264.145 and 264.151), in at least the amount of the cost estimate required by 20.4.1.500 NMAC (incorporating 40 CFR 264.144), and Permit Condition III.E.1. Changes in financial assurance mechanisms must be approved by the Secretary pursuant to 20.4.1.500 NMAC (incorporating 40 CFR 264.145). ~~A copy of the Permittee's financial assurance instrument is attached as Permit Attachment III-2.~~

III.E.1. Cost Estimate for Facility Post-Closure

The Permittee's most recent post-closure cost estimate, prepared in accordance with 20.4.1.500 NMAC (incorporating 40 CFR 264.144), is ~~specified in Permit Attachment III-1~~addressed in Permit Application Section 2.8 and Attachment 2.

a. The Permittee shall adjust the post-closure cost estimate for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument used to comply with 20.4.1.500 NMAC (incorporating 40 CFR 264.145), and Permit Condition III.E. [20.4.1.500 NMAC (incorporating 40 CFR 264.142(b))]

b. The Permittee shall revise the post-closure cost estimate whenever there is a change in the Facility's Post-Closure Plan. [20.4.1.500 NMAC (incorporating 40 CFR 264.144(c))]

c. The Permittee shall keep in the operating record at the Facility the latest post-closure cost estimate. [20.4.1.500 NMAC (incorporating 40 CFR 264.144(d))]

d. Financial assurance funds may be released, upon approval by the Secretary and in accordance with 20.4.1.500 NMAC (incorporating 40 CFR 264.145(a)(10), if the value of the financial assurance mechanism exceeds the

remaining cost of post-closure care. The Permittee shall demonstrate to the Secretary that the value of the financial assurance mechanism exceeds the remaining cost of post-closure care, in order for the Secretary to approve a release of funds. [20.4.1.500 NMAC (incorporating 40 CFR 264.145(a)(10))]

e. The Permittee shall submit itemized bills to the Secretary when requesting reimbursement from the trustee for post-closure care expenditures in accordance with 20.4.1.500 NMAC (incorporating 40 CFR 264.145(a)(11)).

III.F. POST-CLOSURE PERMIT MODIFICATIONS

The Permittee shall request a Permit modification to authorize a change in the approved Post-Closure Plan when a change is made in the Post Closure Plan. This request shall be in accordance with applicable requirements of 20.4.1.900 and 20.4.1.901 NMAC (incorporating 40 CFR Part 270, Subpart D), and must include a copy of the proposed amended Post-Closure Plan for approval by the Secretary. The Permittee shall request a Permit modification whenever changes in operating plans or Facility design affect the approved Post-Closure Plan, or other events occur that affect the approved Post-Closure Plan. The Permittee shall submit a written request for a Permit modification at least 60 days prior to the proposed change in Facility design or operation, or no later than 60 days after an unexpected event has occurred which has affected the Post Closure Plan, and in accordance with 20.4.1.500 NMAC (incorporating 40 CFR 264.118(d)).

III.G. INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS

The Permittee shall comply with 20.4.1.500 NMAC (incorporating 40 CFR 264.148), in the event of bankruptcy proceedings naming the owner or operator or bankruptcy of the financial assurance issuing institution. [20.4.1.500 NMAC (incorporating 40 CFR 264.148)]

~~PERMIT ATTACHMENTS REFERENCED IN MODULE III - POST-CLOSURE CARE~~

~~Permit Attachment No.~~	~~Plan or Document~~
~~III-1~~	~~Post-Closure Cost Estimate~~
~~III-2~~	~~Financial Assurance Trust Agreement~~

~~ATTACHMENT III-1~~

~~Schedule A~~
~~Effective March 20, 2000~~

~~EPA ID Number~~	~~NMT 360010342~~
~~Name:~~	~~Person Generating Station~~
~~Address:~~	~~Broadway Blvd. at Rio Bravo Blvd.~~ ~~Albuquerque, NM~~
~~Current post closure cost estimate:~~	~~$4,417,025~~

ATTACHMENT III 2
TRUST AGREEMENT

Trust Agreement, the "Agreement," entered into as of May 27, 1993, by and between Public service Company of New Mexico, a New Mexico corporation, the "Grantor," and First National Bank in Albuquerque, N.A., the "Trustee."

Whereas, the New Mexico Environmental Improvement Division, "E.I.D.," an agency of the State of New Mexico, has established certain regulations applicable to the Grantor, requiring that an owner or operator of a hazardous waste management facility shall provide assurance that funds will be available when needed for closure and/or post closure care of the facility.

Whereas, the Grantor has elected to establish a trust to provide all or part of such financial assurance for the facilities identified herein.

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee.

Now, Therefore, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

(a) The term "Grantor" means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

Section 2. Identification of Facilities and Cost Estimates. This Agreement pertains to the facilities and cost estimates identified on attached Schedule A.

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a trust fund, the "Fund," for the benefit of EID. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B

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attached hereto. Such property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibilities for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by EID.

Section 4. Payment for Closure and Post Closure Care. The Trustee shall make payments from the fund as the EID Director shall direct, in writing, to provide for the payment of the costs of closure and/or post closure care of the facilities covered by this Agreement. The Trustee shall reimburse the Grantor or other persons as specified by the EID Director from the Fund for closure and post closure expenditures in such amounts as the EPA Regional Administrator shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the EID Director specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund. Payments made to the Trustee for the Fund shall consist of cash or securities acceptable to the Trustee.

Section 6. Trustee Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which

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persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(a) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a 2. (a), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;

(b) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or State Government; and

(c) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a 1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretion conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale.

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No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificate of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depositary even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depositary with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and

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all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation. The Trustee shall annually, at least 30 days prior to the anniversary date of establishment of the Fund, furnish to the Grantor and to the appropriate EID Director a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days prior to the anniversary date of establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the EID Director shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 13. Successor Trustee. The Trustee may resign or the or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor

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trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the EID Director, and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendment to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the EID Director to the Trustee shall be in writing, signed by the EID Director, or his designee, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or EID hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or EID, except as provided for herein.

Section 15. Notice of Nonpayment. The Trustee shall notify the Grantor and the EID Director, by certified mail within 10 days following the expiration of the 30 day period after the anniversary of the establishment of the Trust, if no payment is received from the Grantor during that period. After the pay in period is completed, the Trustee shall not be required to send a notice of nonpayment.

Section 16. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the appropriate EPA Regional Administrator, or by

the Trustee, and the EID Director if the Grantor ceases to exist.

Section 17. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the EID Director, or by the Trustee and the EID Director, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

Section 18. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the EID Director issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 19. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of the State of New Mexico.

Section 20. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section. of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

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In Witness Whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written: The parties below certify that the wording of this Agreement is identical to the wording specified in the New Mexico Hazardous Waste Management Regulation, Part II, 206.D.3.j.(1)(a), as such regulations were constituted on the date first above written.

_____
Senior Vice President and
Chief Financial officer

Attest:

Financial Compliance Specialist
[Seal]

Attest:

Title
[Seal]

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MODULE IV - CORRECTIVE ACTION CONDITIONS AND REQUIREMENTS

IV.A. CORRECTIVE ACTION FOR RCRA-REGULATED UNITS

The Corrective Action Program addressing the release of contaminants to ~~soil and~~ groundwater from the ~~dry well~~Unlined Well ~~RCRA regulated unit~~ is described in the Permit Application as the Post-Closure Care Plan (Permit Application Section 4), which is incorporated by reference into this Permit. ~~The Corrective Action Program for soil is at Permit Application Volume 3, Section 3; the~~ Corrective Action Program for shallow ~~and deeper~~ groundwater is ~~at~~ in Permit Application Section 4 ~~Volume 4, Section 3; and the Corrective Action Program for deeper groundwater is at Permit Application Volume 5, Section 3~~.

~~IV.A.1 Corrective Action for Soil~~

~~a. The Permittee shall comply with the Corrective Action Program for soils, consisting of a soil vapor extraction (SVE) system, described in Permit Application Volumes 2 and 3. The cleanup standards for soil are:~~

~~i. For all soil, meaning from the ground surface to the water table, Soil Screening Levels (SSLs) for Transfers from Soil to Groundwater (DAF=20) in 1999 EPA Region 6 Human Health Medium Specific Screening Levels. The SSLs for the Constituents of Concern (COCs) at the Site are:~~

~~PCE 0.06 mg/kg~~
~~1,1 DCE 0.06 mg/kg~~
~~1,1,1 TCA 2.0 mg/kg~~

~~ii. For surface soil, meaning from the surface of the ground to 12 feet below the ground surface, a cumulative 10-5 carcinogenic risk level for all three COCs. This risk level is calculated by multiplying by 10/3 the residential Risk Based Screening Level in the 1999 EPA Region 6 Human Health Medium Specific Screening Levels. The acceptable risk level for surface soil at the Site are:~~

~~PCE 16.0 mg/kg~~
~~1,1 DCE 0.18 mg/kg~~
~~1,1,1 TCA 1,400.0 mg/kg (saturation level)~~

~~b. The Permittee shall operate the SVE system to meet the following performance standards:~~

~~i. No leakage of water on the surface shall be allowed to occur around the SVE well which might serve to drive the contaminants lower in the vadose zone;~~

~~ii. Air releases shall meet the standards of Bernalillo County air emission regulations.~~

~~c. If the Permittee demonstrates attainment of soil remediation standards under Permit Condition IV.A.1.a.i. and ii. above in accordance with this Permit and in accordance with the sampling and analysis provisions specified in Permit Application Volume 3, Section 6, then the Permittee may submit a request to the Secretary to shorten the post-closure care period for soil, in accordance with 20.4.1.500 NMAC (incorporating 40 CFR 264.117(a)(2)(i)), and to terminate the Corrective Action Program at the Site for soil.~~

IV.A.2 Corrective Action for Groundwater

The Permittee shall comply with the Corrective Action Program for groundwater specified in Permit Application Section 4 ~~Volumes 2, 4 and 5~~; with the corrective action conditions and requirements in this Permit Module; and with the requirements of 20.4.1.500 NMAC (incorporating 40 CFR Part 264, Subpart F).

a. General Requirements

i. Groundwater Protection Standard

(a) Hazardous Constituents. The Permittee shall monitor at the well locations, frequencies, and for the Hazardous Constituents specified in Permit Application Section 4 ~~Volume 4, Table 3.2 and Appendix F, and Volume 5, Table 3.5 and Appendix D~~, and at other wells as may be required under IV.A.2.a.iv.(i) below. The constituents that currently exceed standards in groundwater at the Site (Chemicals of Concern or COCs) are:

tetrachloroethylene (PCE)
1,1-dichloroethylene (1,1-DCE)
1,1,1-trichloroethane (1,1,1-TCA)
[20.4.1.500 NMAC (incorporating 40 CFR 264.93)]

(b) Concentration Limits. The maximum concentrations of all Hazardous Constituents in the groundwater shall not exceed the more stringent of WQCC standards or MCLs. The concentration limits for the COCs at the Site are:

PCE	5.0 µg/L
1,1-DCE	5.0 µg/L
1,1,1-TCA	60.0 µg/L

[20.1.500 NMAC (incorporating 40 CFR 264.94)]

(c) Point of Compliance. The point of compliance is the vertical surface located perpendicular to the groundwater flow direction at PSMW-1R and extending into the uppermost aquifer. The concentration limits in Permit Condition IV.A.2.a.i.(b) above shall apply at all wells retained in the groundwater monitoring network (see Application Section 4.4.1)~~at and downgradient from the point of compliance~~. [20.4.1.500 NMAC (incorporating 40 CFR 264.95)]

ii. The Permittee shall continue the Corrective Action Program in accordance with Section 4 of the Permit Application until the groundwater protection standards set forth in Permit Conditions IV.A.2.a.i.(a), (b), and (c) above have not been exceeded for three consecutive years. [20.4.1.500 NMAC (incorporating 40 CFR 264.100(f))]

iii. If the Permittee or the Secretary determines that the Corrective Action Program established by this Permit no longer satisfies the requirements of RCRA, the HWA, regulations promulgated pursuant to RCRA and the HWA, or this Permit, then the Permittee shall, within 90 days of the determination, submit for approval by the Secretary a request for a permit modification to make any appropriate changes to the Corrective Action Program which will satisfy RCRA, the HWA, the regulations, and this Permit. [20.4.1.500 NMAC (incorporating 40 CFR 264.100(h))]

iv. Groundwater Monitoring

(a) The Permittee shall maintain the groundwater monitoring program specified in Permit Application Section 4~~Volumes 4 and 5~~ for the duration of the Corrective Action Program, as specified in Permit Application Section 4~~Volume IV, Section 3.3.2.2., Volume V, Section 3.3.3.,~~ and Permit Condition IV.A.2.a.ii. above, to demonstrate the effectiveness of the Corrective Action Program for groundwater and to meet the requirements of 20.4.1.500 NMAC (incorporating 40 CFR 264.97). [20.4.1.500 NMAC (incorporating 40 CFR 264.100(d))]

(b) The Permittee shall maintain groundwater monitoring wells at the locations specified in Permit Application Section 4 and on Figure 14 ~~Volume 4, Figure 3.3, Volume 5, Figure 3.1, and on the Detailed Site Map in Permit Application Volume 1, Attachment 3~~, subject to Permit Condition IV.A.2.a.iv.(i) below. [20.4.1.500 NMAC (incorporating 40 CFR 264.97(c) and 264.100(a)(3) and (d))]

(c) The Permittee shall monitor for the hazardous constituents and at the frequencies specified in Permit Application Section 4~~Volume 4, Table 3.2 and Appendix F, and Volume 5, Table 3.5 and Appendix D~~, during the Corrective Action Program. [20.4.1.500 NMAC (incorporating 40 CFR 264.93)]

(d) The Permittee shall determine the groundwater flow rate and direction in the uppermost aquifer at least annually. [20.4.1.500 NMAC (incorporating 40 CFR 264.98(e))]

(e) Groundwater Surface Elevation

(i) The Permittee shall determine the groundwater surface elevation at each well within the groundwater monitoring network specified in Application Section 4.4.1 semianually (each time ground water is sampled). [20.4.1.500 NMAC (incorporating 40 CFR 264.97(f))]

(f) Sampling and Analysis Procedures

(i) The Permittee shall comply with the procedures specified in Permit Application Section 4.5~~Volume 4, Section 3.6., and Volume 5, Section 3.5.~~, when obtaining and analyzing samples from all groundwater monitoring wells. [20.4.1.500 NMAC (incorporating 40 CFR 264.97(d) and (e))]

(ii) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste to be analyzed shall be the appropriate method from Appendix I of 40 CFR Part 261 or an equivalent method approved by the Secretary. Laboratory methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846, Standard Methods of Wastewater Analysis or an equivalent method. [20.4.1.900 NMAC (incorporating 40 CFR 270.30(j) (l))]

(g) Recordkeeping and Reporting

(i) The Permittee shall enter all monitoring, testing and analytical data obtained in the operating record. The data shall include all computations, calculated means, variances, and results of the statistical tests specified in Permit

Condition IV.A.2.a.iv(g) above. [20.4.1.500 NMAC (incorporating 40 CFR 264.73(b)(6))]

(ii) The Permittee shall submit a written report semi-annually to the Secretary on the effectiveness of the Corrective Action Program. [20.4.1.500 NMAC (incorporating 40 CFR 264.100(g))]

(iii) The Permittee shall submit the results of all sampling and analysis under the Corrective Action Program to the Secretary annually.

(h) Well Replacement and Abandonment

(i) The Permittee shall replace any groundwater monitoring well removed from service with a monitoring well located as close to the abandoned well as practicable. The Permittee shall submit the proposed location and construction specifications for the new well to the Secretary for prior approval.

(ii) The Permittee shall record the surveyed location and elevation of a new monitoring well when the well is installed.

(iii) All wells removed from the monitoring program shall be plugged and abandoned by the Permittee so as to ensure that the abandoned well will not serve to transport contaminants to the aquifer and will be otherwise in compliance with all applicable regulations. The Permittee shall submit well plugging and abandonment specifications to the Secretary for approval prior to abandoning the well.

b. Corrective Action Program for Shallower Groundwater

The Permittee shall comply with the Corrective Action Program for the shallower groundwater, consisting of extraction wells and ~~an air stripper~~carbon treatment system, specified in Permit Application Section 4~~Volume 4~~, and conditions and requirements specified in this Permit Module. The locations of the extraction wells are specified in Figure 14~~the Detailed Site Map, Application Volume 1, Attachment 3~~. The locations of the groundwater monitoring wells ~~for the shallower groundwater~~ are specified in Figure 14~~the Detailed Site Map and in Application Volume 4, Figure 3.3~~.

The Permittee shall conduct the Corrective Action Program to ensure that the groundwater protection standards, as defined ~~at~~ in Permit ~~Section~~ Condition

IV.A.3.a.i. above, are not exceeded at any of the groundwater monitoring network wells as specified in Application Section 4.4.1~~and downgradient from the compliance point~~, and to ensure compliance with the requirements of 20.4.1.500 NMAC (incorporating 40 CFR Part 264, Subpart F). [20.4.1.500 NMAC (incorporating 40 CFR 264.100)]

i. Hazardous Constituents. The Permittee shall monitor at the locations, frequencies, and for the hazardous constituents specified in Permit Application Section 4 ~~Volume 4, Table 3.2 and Appendix F~~. [20.4.1.500 NMAC (incorporating 40 CFR 264.93)]

ii. Sampling and Analysis Procedures. The Permittee shall comply with the procedures specified in Permit Application Section 4 ~~Volume 4, Sections 3.6.3.3. and 3.6.3.4.~~, when obtaining and analyzing samples from the ground-water monitoring wells. [20.4.1.500 NMAC (incorporating 40 CFR 264.97(d) and (e))]

~~e. Corrective Action Program for Deeper Groundwater~~

~~Corrective Action for the deeper groundwater consists of monitored natural attenuation specified in Permit Application Section 4 Volume 5. The Permittee shall comply with the monitoring program specified in Permit Application Volume 5Section 4. The locations of the monitoring wells for the deeper groundwater are specified in Figures 14 and 15the Detailed Site Map, Application Volume 1, Attachment 3, and in Application Volume 5, Figure 3.1.~~

~~The Permittee shall conduct the Corrective Action Program to ensure that the groundwater protection standards, as specified in Permit Condition IV.A.2.a.i. and ii. above, are not exceeded, and to ensure compliance with the requirements of 20.4.1.500 NMAC (incorporating 40 CFR Part 264, Subpart F). [20.4.1.500 NMAC (incorporating 40 CFR 264.100)]~~

~~i. Hazardous Constituents. The Permittee shall monitor at the locations, frequencies, and for the hazardous constituents specified in Permit Application Section 4 Volume 5, Table 3.5 and Appendix D. [20.4.1.500 NMAC (incorporating 40 CFR 264.93)]~~

~~ii. Sampling and Analysis Procedures. The Permittee shall comply with the procedures specified in Permit Application Section 4.5Volume 5, Section 3.5.3., when obtaining and analyzing samples from the ground-water monitoring wells. [20.4.1.500 NMAC (incorporating40 CFR 264.97(d) and (e))]~~

IV.B. CORRECTIVE ACTION FOR SWMU

IV.B.1. Applicability

The Conditions of IV.B. apply to:

~~a. The SWMUs and AOCs identified in Appendices A.1 and A.2 of this Module;~~

a~~b~~. Any additional SWMUs or AOCs that may be discovered.

IV.B.2. Notification and Assessment Requirements for Newly Identified SWMUs and AOCs

a. The Permittee shall notify the Secretary in writing, within fifteen (15) calendar days of discovery, of any suspected new SWMU or AOC. The notification shall include, at a minimum, the location of the SWMU or AOC and all available information pertaining to the nature of the release (e.g., media affected, hazardous constituents released, magnitude of release, etc.).

b. The Permittee shall prepare and submit to the Secretary, within ninety (90) calendar days of the notification under Condition IV.B.2.a above, a SWMU Assessment Report (SAR) for each SWMU or AOC identified under Condition IV.B.2.a. above. At a minimum, the SAR shall provide the following information:

i. Location of unit(s) on a topographic map of appropriate scale;

ii. Designation of type and function of unit(s);

iii. General dimensions, capacities and structural description of unit (s) (supply any available plans/drawings);

iv. Dates that the unit(s) was operated;

v. Specification of all wastes that have been managed at/in the unit(s) to the extent available. Include any available data on hazardous constituents in the wastes;

vi. All available information pertaining to any release of hazardous waste or hazardous constituents from such unit(s), including groundwater data, soil analyses, air, and surface water data;

c. Based on the results of the SAR, the Secretary shall determine the need for further investigations at the SWMUs or AOCs covered in the SAR, including the need for an RFI under Permit Condition IV.B.5. below. The Secretary will notify the Permittee in writing of the final determination of the status of the suspected SWMU or AOC. If the Secretary determines that further investigation of a SWMU or AOC is required, the Permit will be modified to include the

newly discovered SWMU or AOC to ~~the~~ a list of SWMUs requiring further investigation ~~in Appendix A.1~~, in accordance with 20.4.1.900 and 20.4.1.901 NMAC (incorporating 40 CFR Part 270, Subpart D). If the Secretary determines that further investigation is needed, the Permittee shall submit a Workplan for such investigation for approval by the Secretary.

~~IV.B.3. Reporting Planned Changes~~

~~The Permittee shall give written notice to the Secretary as soon as possible of any planned physical alterations or additions which impact known or suspected contamination at or from SWMUs or AOCs listed in Appendix A.1.~~

IV.B.4. Notification Requirements for Newly Discovered Releases from SWMUs or AOCs

a. The Permittee shall notify the Secretary in writing of any newly discovered release of hazardous waste or Hazardous Constituents from a SWMU or AOC discovered during the course of groundwater monitoring, field investigations, environmental audits, or other means, within fifteen days of discovery.

b. The Secretary will notify the Permittee in writing of the final determination of the status of the newly discovered release from a SWMU or AOC. If the Secretary determines that further investigation of a SWMU or AOC is needed, the Permittee shall submit a Workplan for such investigation for approval by the Secretary.

IV.B.5. RCRA Facility Investigation (RFI)

a. RFI Work Plan

i. The Secretary may require that the further investigation under Permit Conditions IV.B.2.c. and IV.B.4.b. above be in the form of an RFI. The Permittee shall prepare and submit to the Secretary, within ninety days of receipt of notice from the Secretary that an RFI is required, an RFI Work Plan for those units requiring further investigation.

ii. The RFI Work Plan shall include schedules of implementation and completion of specific actions necessary to determine the nature and extent of contamination and the potential pathways of contaminant releases to the air, soil, surface water, and groundwater.

iii. The RFI Work Plan must be approved by the Secretary, in writing, prior to implementation. If the Secretary disapproves the RFI Work Plan, the Secretary shall notify the Permittee in writing of the RFI Work Plan's deficiencies and specify a due date for submission of a revised RFI Work

Plan. Upon approval by the Secretary, the RFI Work Plan and any revisions thereto shall be incorporated by reference and made an enforceable part of this Permit.

b. RFI Implementation

The Permittee shall implement the RFI in accordance with the approved RFI Work Plan. The Permittee shall notify the Secretary at least 20 days prior to any sampling activity under the RFI Workplan.

c. RFI Reports

i. The Permittee shall prepare and submit to the Secretary an RFI Report, prepared in accordance with HWB guidance documents, for the investigations conducted pursuant to the RFI Work Plan. The RFI Report shall include an analysis and summary of all required investigations of SWMUs and AOCs and their results. The summary shall describe the type and extent of contamination at the facility, including sources and migration pathways, identify all hazardous constituents present in all media, and describe actual or potential human and ecological receptors. The RFI Report shall also describe the extent of contamination in relation to background levels and shall include cleanup levels.

ii. The Secretary will, following review of the RFI Report, notify the Permittee of the need for further investigation, including a Corrective Measures Study, or of a no further action decision.

IV.B.6. Interim Measures (IM)

a. IM Work Plan

i. If required by the Secretary, the Permittee shall prepare and submit an Interim Measures (IM) Work Plan. Interim measures will be required if necessary to reduce or prevent migration of contaminants or human or environmental exposure to contaminants while long-term corrective action remedies are evaluated and implemented. The Permittee may initiate interim measures by submitting notification to the Secretary.

ii. The IM Work Plan shall ensure that the interim measures are designed to mitigate any current or potential threats to human health or the environment and are consistent with and integrated into any long-term solution at the facility.

iii. The IM Work Plan must be approved by the Secretary prior to implementation. If the Secretary disapproves the IM Work Plan, the Secretary will notify the Permittee in writing of the IM Work Plan's

deficiencies and specify a due date for submission of a revised IM Work Plan. Upon approval by the Secretary, the IM Work Plan and any revisions thereto shall be incorporated by reference and made an enforceable part of this Permit.

b. IM Implementation

i. The Permittee shall implement the interim measures in accordance with the approved IM Work Plan.

ii. The Permittee shall prepare and submit to the Secretary, within ninety days of completion of interim measures, an IM Report summarizing the results of the interim measures, and including copies of all relevant laboratory, monitoring, and other data.

IV.B.7. Corrective Measures Study (CMS)

a. CMS Work Plan

i. The Permittee shall submit a CMS Work Plan within ninety days of notification by the Secretary that a CMS is required. The CMS may be concurrent with the RFI.

ii. The CMS Work Plan shall include schedules of implementation and completion of specific actions necessary to complete the CMS.

iii. The Secretary will either approve or disapprove, in writing, the CMS Work Plan. If the Secretary disapproves the CMS Work Plan, the secretary will notify the Permittee in writing of the CMS Work Plan's deficiencies and specify a due date for submittal of a revised CMS Work Plan. Upon approval by the Secretary, the CMS Work Plan and any revisions thereto shall be incorporated by reference and made an enforceable part of this Permit.

b. CMS Report

i. The Permittee shall submit to the Secretary a CMS Report evaluating each remedial alternative.

ii. If the Secretary disapproves the CMS Report, the Secretary will notify the Permittee in writing of deficiencies in the CMS Report and specify a due date for submittal of a revised CMS Report. The Secretary will notify the Permittee of any no further action decision.

IV.B.8. Corrective Measures Implementation

a. The Permittee shall implement the remedy chosen in the CMS Report. The Permittee shall submit a CMI completion report to the Secretary in accordance with a schedule for completion determined by the Secretary.

~~APPENDIX A.1~~

~~List of SWMUs and AOCs requiring corrective action:~~

~~1. Natural pit area.~~