

Person Generating Station
Post Closure Cost Estimate for 2003

Line Item	Description	Cost
1a	RCRA Permit - Yearly Administration, Inspections, and Reporting (thru 2018)-See Detail 1a	\$ 24,220.00
1b	Shallow GW Sampling Program - Annual Cost for Next 16 Years, (thru 2018)-See Detail 1b	\$ 49,877.00
1c	Deeper GW Sampling Program - Annual Cost for Next 16 Years, (thru 2018)-See Detail 1c	\$ 41,684.00
1d	Increased Sampling Frequency to Demonstrate Attainment of GW Goals - See Detail 1d	\$ 99,754.00
2	RCRA Permit - Non-recurring Costs for 2003 - Natural Pit Remediation, Permit Modification-See Detail 2	\$ 107,455.00
2a	Future NMED Permit Fees, Associated PNM Labor and Contractor Costs - See Detail 2a	\$ 564,960.00
3	Shallow GW Corrective Action Program - Additional Equipment Installation Costs for 2003 - See Detail 3	\$ 172,000.00
4	Shallow GW Corrective Action Program (thru 2015) - Annual Operation Costs - See Detail 4	\$ 66,480.00
5	Deeper Groundwater Assessment Program - 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 15th Year (2003) of Permit (line items 1a+1b+1c+2+3+4+5+6+7)	\$ 461,716.00
9	Estimate for Next 16 Years (PC Period): line 8 + line 1d + line 2a + 15*(line 1a) + 15*(line 1b) + 15*(line 1c) + 12*(line 4)	\$ 3,660,905.00
Date of Cost Estimate:		3/18/2003
Notes:		
1. Lines 5, 6 and 7 are set to zero and assumes no engineered corrective action will be needed for deeper GW.		
2. Line 4 - CAP program for shallow GW estimated to require 13 additional years of active pumping to complete (Last 3 years of permit would require sampling verification only).		
3. All labor costs are calculated at \$80 per hour.		

Detail 1
RCRA Permit - Yearly Administration, Inspections, GW Sampling, Maintenance, Reporting
(2003 Through 2018)

Assumed Average Labor Rate For All Hourly Activities:		\$80.00							
Line Item	Description	Labor or Unit Rate	Hrs/Item or 1 Unit	Items Per Year	Annual Cost (\$)	Group Subtotal			
Permit Inspections									
1	Closure Cap Inspection	\$80.00	1	2	\$ 160.00				
2	Security Fence Inspection	\$80.00	1	2	\$ 160.00				
						\$ 320.00			
Program Administration/Reporting									
3	Administrative Activities, Meetings, Regulatory Contact	\$ 80.00	120	1	\$ 9,600.00				
4	Annual Data Report Preparation	\$ 80.00	160	1	\$ 12,800.00				
5	Miscellaneous Costs: copies, binders, supplies, reference materials	\$ 1,500.00	1	1	\$ 1,500.00				
6	RESERVED								
						\$ 23,900.00			
Subtotal for Detail 1a:						\$ 24,220.00			
Shallow GW Sampling Program (38 wells)									
						Shallow GW Well Group	Number	Sample Hrs @	Total Hours
7	Preparation - Equipment checkout, planning, set up.	\$ 80.00	8	2	\$ 1,280.00	1R,3B,6R,7R,8A,8B,10,11,13A,14,37	11	1.0	11.0
8	Water Level Measurements (2 operators, WL readings at 43 wells)	\$ 80.00	16	2	\$ 2,560.00	1B,13B	2	1.5	3.0
9	Purge and Sampling of 38 Wells (2 operators)	\$ 80.00	65.5	2	\$ 10,480.00	25, 26, EW-1, VEW, EW-2, EW-3, EW-4, EW-5	8	0.5	4.0
10	Data Review/Evaluation	\$ 80.00	40	2	\$ 6,400.00	17,18,19,20,21,22,23,29	8	2.5	20.0
11	Administration	\$ 80.00	24	2	\$ 3,840.00	27,28,30,31,32,34,35,36	8	3.0	24.0
12	Well Replacement/Maintenance (assume 1 well replaced/yr)	\$ 10,000.00	1	1	\$ 10,000.00	33	1	3.5	3.5
13	Sampling Supplies/Equipment	\$ 750.00	1	2	\$ 1,500.00	Totals:	38	12.0	65.5
14	Lab Analysis (8021halo x 44)	\$ 100.00	44	2	\$ 8,800.00				
15	Lab Analysis (App. IX)	\$ 1,765.00	1	1	\$ 1,765.00				
16	Non Labor Costs: vehicles, gas cylinders, miscellaneous	\$ 1,626.00	1	2	\$ 3,252.00				
Subtotal For Detail 1b:						\$ 49,877.00			
						Cylinders: 1.0 per well, \$17 per cyl., = 38 * 1.0 * \$17 = \$646			
						Vehicles: 48 hr * \$5/hr * 2 vehicles = \$480			
						Misc: \$500			
						Estimate per sampling event	\$ 1,626		
Deeper GW Sampling Program (15 wells)									
						Deeper GW Well Group	Number	Sample Hrs @	Total Hours
17	Preparation - Equipment checkout, planning, set up.	\$ 80.00	8	2	\$ 1,280.00	17-8,19-8,22-8	3	6.0	18.0
18	Water Level Measurements (2 operators, WL readings at 42 wells)	\$ 80.00	16	2	\$ 2,560.00	19-5, 21-5,8, 24-4,5,6,8, 25-5,8	9	3.0	27.0
19	Purge and Sampling of 15 Deep CAD Wells (2 operators)	\$ 80.00	51	2	\$ 8,160.00	27-4,5,6	3	2.0	6.0
20	Data Review/Evaluation	\$ 80.00	40	2	\$ 6,400.00	Totals:	15	11.0	51.0
21	Administration	\$ 80.00	24	3	\$ 5,760.00				
22	Well Maintenance	\$ 10,000.00	1	1	\$ 10,000.00				
23	Sampling Supplies/Equipment	\$ 500.00	1	2	\$ 1,000.00				
24	Lab Analysis (8021halo x 19)	\$ 100.00	19	2	\$ 3,800.00				
25	Non Labor Costs: vehicles, gas cylinders, miscellaneous	\$ 1,362.00	1	2	\$ 2,724.00				
Subtotal For Detail 1c:						\$ 41,684.00			
						Cylinders: 1.5 per well, \$17 per cyl., = 15 * 1.5 * \$17 = \$382			
						Misc: \$500			
						Vehicles: 48 hrs*\$5/hr x 2 vehicles = \$480			
						Estimate per sampling event	\$ 1,362		
26 Detail 1 Total:						\$ 115,781.00			
Increased Sampling To Demonstrate Attainment of GW Goals									
27	Add'l Sampling at Shallow Groundwater Wells	\$ 24,938.50	1	4	\$ 99,754.00				
Subtotal For Detail 1d:						\$ 99,754.00			
<p>Note: Sampling will need to 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.</p>									

Detail 2
RCRA Permit - Non-Recurring Costs For 2003, Including Permit Modification

Assumed Average Labor Rate For All Hourly Activities:		\$80.00				
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 2003						
1	Miscellaneous - Non labor PNM costs	\$2,500.00	1	1	\$2,500.00	
2	Soil CAP - Documenting completeness (see details below)	\$70,075.00	1	1	\$70,075.00	
3	SVE 2003 Operation	\$5,680.00	1	1	\$5,680.00	
						\$78,255.00
Natural Pit Remediation - Completion of Activities						
6	PNM Administrative Costs	\$80.00	40	1	\$3,200.00	
7	PNM Miscellaneous Costs	\$1,000.00	1	1	\$1,000.00	
8	NMED Permit Modification Fee (NFA-Class III)	\$25,000.00	1	1	\$25,000.00	
9	Lab Analysis: to support risk based closure	\$0.00	0	0	\$0.00	
						\$29,200.00
	Detail 2 Total:					\$107,455.00
Soil CAP - Documenting Completeness						
	Drill 2 auger holes, head space analysis, soil samples at 10' intervals	\$ 7,500.00	1	1	\$7,500.00	
	Design/fabricate/install up to 5 vapor probes in each hole	\$ 6,000.00	1	1	\$6,000.00	
	Lab Analysis - En-core soil samples collected during probe installation	\$ 225.00	1	25	\$5,625.00	
	Lab Analysis - TOC and moisture	\$ 30.00	1	15	\$450.00	
	Miscellaneous Costs: En-core sampler, cuttings disposal, etc.	\$ 20,500.00	1	1	\$20,500.00	
	Lab Analysis - Vapor probe gas sampling (5 probes x two samples)+SVE	\$ 400.00	11	1	\$4,400.00	
	Data Analysis and Reporting (Contractor)	\$ 20,000.00	1	1	\$20,000.00	
	Administration-PNM review and involvement	\$80.00	70	1	\$5,600.00	
						\$ 70,075.00
Vapor Extraction System - Operation (2003 Only)						
	PNM Labor	\$80.00	1	26	\$2,080.00	
	Compliance Sampling	\$400.00	2	2	\$1,600.00	
	Carbon Disposal	\$2,000.00	1	1	\$2,000.00	
						\$5,680.00

Detail 2a - NMED Permit Fees

The estimate below takes into account the current NMED fee structure against an assumed number of permit actions over the life of the permit.			
<u>Activity</u>	<u>Number</u>	<u>Fee</u>	<u>Total For This Activity</u>
Permit Renewal (circa 2008)	1	\$ 90,000.00	\$ 90,000.00
HSWA Module Fee	1	\$ 7,500.00	\$ 7,500.00
Class I Modifications	12	\$ 1,000.00	\$ 12,000.00
Class II Modifications	8	\$ 10,000.00	\$ 80,000.00
Class III Modifications	2	\$ 25,000.00	\$ 50,000.00
Annual NMED PC Business Fee	16	\$ 2,000.00	\$ 32,000.00
Hearing Fees	4	\$ 5,000.00	\$ 20,000.00
			\$ 291,500.00
<u>Other Costs</u>	<u>Labor/Unit Rate</u>	<u>Hrs/item or 1 unit</u>	<u>Total For This Activity</u>
PNM Labor Toward Permit Renewal	\$80.00	600	\$ 48,000.00
Contractor Labor for Renewal	\$ 150,000.00	1	\$ 150,000.00
Labor for Class I Mods (24hrsx12)	\$80.00	288	\$ 23,040.00
Labor for Class II Mods (48hrs x8)	\$80.00	384	\$ 30,720.00
Labor for Class III Mods (120hrs x 2)	\$80.00	240	\$ 19,200.00
Contractor Labor for PC Certification	\$2,500.00	1	\$ 2,500.00
			\$ 273,460.00
Detail 2a Total:			\$ 564,960.00

Detail 3

CAD - Shallow Groundwater Corrective Action Program - Additional Equipment Installation Costs

Assumed Average Labor Rate For All Hourly Activities:		\$80.00				
Line Item	Description	Labor or Unit Rate	Hrs/item or 1 Unit	Items Per Year	Annual Cost (\$)	Group Subtotal
1	Plugging and Abandonment of 2 in. Shallow Wells	\$800.00	15	1	\$12,000.00	
2	Plugging and Abandonment of 4 in. Shallow Wells	\$1,000.00	20	1	\$20,000.00	
3	Plug and Abandonment of 4 in. Deep Wells	\$2,000.00	3	1	\$6,000.00	
4	Plug and Abandonment of Cluster Wells	\$8,000.00	7	1	\$56,000.00	
5	Plug and Abandonment of PSMW-25,26,EW-1,EW-2,E EW-3, EW-4, EW-5, and VEW	\$3,000.00	8	1	\$24,000.00	
6	Additonal/Replacement Extraction Wells	\$15,000.00	3	1	\$45,000.00	
7	Engineering Design/Piping and Trenching to GWTP for Future Extraction Wells	\$3,000.00	3	1	\$9,000.00	
						\$172,000.00
	Detail 3 Total:				\$172,000.00	

Detail 5

CAD - Deep 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 Deep Groundwater Assessment Completion					\$0.00		

Detail 6

CAD - Deep 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 1.										
CAD - Deep Groundwater Corrective Action Program - Installation Costs:							\$0.00			

Detail 7

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

Actual Post-Closure Costs
 Public Service Company of New Mexico
 Person Generating Station (NMT 360010342)

Costs Through 2002

Routine Permit Activities	
• Labor	\$ 617,421
• Other	<u>\$ 1,128,194</u>
Subtotal for Routine Activities	\$ 1,745,615
Corrective Action Directive	
Shallow Groundwater Assessment	
• Labor	\$ 105,554
• Other	<u>\$ 834,085</u>
Subtotal Shallow Groundwater Assessment	\$ 939,639
Shallow Groundwater Remediation (Installation)	
• Labor	\$ 152,686
• Other	<u>\$ 1,977,344</u>
Subtotal	\$ 2,130,030
Deep Groundwater Assessment	
• Labor	\$ 45,040
• Other	<u>\$ 2,018,080</u>
Subtotal	\$ 2,063,120
Production Well Closure	
• Labor	\$ 9,855
• Other	<u>\$ 88,908</u>
Subtotal	\$ 98,763
CAP Operation	
• Labor	\$ 76,184
• Other	<u>\$ 217,573</u>
Subtotal	\$ 293,757
Subtotal for CAD Activities:	\$ 5,525,309
Total for all Post-Closure Costs:	\$ 7,270,924