POWER RESOURCES INC HIGHLAND URANIUM PROJECT
SURETY ESTIMATE REVISION

Total Restoration and Reclamation Cost Estimate		
I.	GROUNDWATER RESTORATION COST	$8,084,019
II.	EQUIPMENT REMOVAL & DISPOSAL COST	$134,522
III.	BUILDING DEMOLITION AND DISPOSAL COST	$1,267,087
IV.	WELLFIELD BUILDINGS & EQUIPMENT REMOVAL & DISPOSAL COST	$1,788,455
V.	WELL ABANDONMENT COST	$1,881,458
VI.	WELLFIELD AND SATELLITE SURFACE RECLAMATION COST	$118,695
VII.	TOTAL MISCELLANEOUS RECLAMATION COST	$804,464
	SUBTOTAL RECLAMATION AND RESTORATION COST ESTIMATE	$14,078,700
	SUBTOTAL	$14,078,700
	ADMINISTRATIVE, OVERHEAD, AND CONTINGENCY ITEMS (25%)	$3,519,675
	TOTAL	$17,598,375
	TOTAL CALCULATED SURETY (IN 2006 DOLLARS)	**$17,598,400**

Ground Water Restoration	Mine Unit-A	Mine Unit-B	Mine Unit-C	C-19N Pattern	C-Haul. Drifts	Mine Unit-D	Mine Unit-E	Mine Unit-F	Mine Unit-H	Mine Unit-D Ext.	Mine Unit-I	Mine Unit-J	Mine Unit-JA
PV Assumptions													
Wellfield Area (ft2)	151900	690900	1274000	32500		279500	994500	3348000	1116000	216000	891231	1200000	0
Wellfield Area (acres)	3.49	15.86	29.25	0.75	0.00	6.42	22.83	76.86	25.62	4.96	20.46	27.55	0.00
Affected Ore Zone Area (ft2)	151900	690900	1274000	32500	0	279500	994500	3348000	1116000	216000	891231	1200000	0
Avg. Completed Thickness	15	15	15	15		15	15	15	15	15	15	20	20
Porosity	0.27	0.27	0.27	0.27		0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Perimeter Injection Wells/ ft2			2.05E-04			2.54E-04	2.63E-04	2.00E-04	2.43E-04	2.45E-04	2.55E-04	2.55E-04	2.55E-04
Flare Factor	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Affected Volume (ft3)	3417750	15545250	28665000	731250	1360000	6288750	22376250	75330000	25110000	4860000	20052698	36000000	0
Kgallons per Pore Volume	6902	31395	57892	1477	10173	12701	45191	152136	50712	9815	40498	72706	0
Number of Patterns in Unit(s)													
Current	31	141	196	5	0	43	153	465	155	30	124	120	0
Estimated next report period	0	0	0	0	0	0	0	0	0	0	0	0	
Total Estimated	31	141	196	5	0	43	153	465	155	30	124	120	0
Number of Wells in Unit(s)													
Production Wells													
Current	27	141	192			45	143	465	155	30	125	120	0
Estimated next report period	0	0	0			0	0	0	0	0	0	0	0
Total Estimated	27	141	192			45	143	465	155	30	125	120	0
Injection Wells													
Current	50	319	343			91	307	903	327	67	236	240	0
Estimated next report period	0	0	0	Wells		0	0	0	0	0	0	0	0
Total Estimated	50	319	343	included		91	307	903	327	67	236	240	0
Monitor Wells				under									
Current	18	67	78	C-Wellfield		38	86	134	81	20	39	41	0
Estimated next report period	0	0	0			0	0	0	0	0	0	0	
Total Estimated	18	67	78			38	86	134	81	20	39	41	0
Restoration Wells													
Current	13	30	19			0	0	15	0	0	0	0	0
Estimated next report period	0	0	0			0	0	0	0	0	0	0	0
Total Estimated	13	30	19					15	0	0	0	0	0
Number of Wells per Wellfield	108	557	632	0	0	174	536	1517	563	117	400	401	0
Total Number of Wells	4087												
Average Well Depth (ft)	500	450	550	550	550	600	550	650	500	600	650	540	540
I. Restoration Well Installation Costs													
Number of Restoration Wells	0	0	0	0	0	0	0	0	0	0	0	0	0
Well Installation Unit Cost ($/Well)	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000
Subtotal Restoration Well Installation Costs per Wellfield	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Restoration Well Installation Costs	**$0**												

Ground Water Restoration	Mine Unit-A	Mine Unit-B	Mine Unit-C	C-19N Pattern	C-Haul. Drifts	Mine Unit-D	Mine Unit-E	Mine Unit-F	Mine Unit-H	Mine Unit-D Ext.	Mine Unit-I	Mine Unit-J	Mine Unit-JA
II. Ground Water Sweep Costs													
PV's Required	0	1	1	1	1	1	1	1	1	1	1	1	1
Total Kgals for Treatment	0	31395	57892	1477	10173	12701	45191	152136	50712	9815	40498	72706	0
Ground Water Sweep Unit Cost ($/Kgal)	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
Subtotal Ground Water Sweep Costs per Wellfield	$0	$47,081	$86,817	$2,215	$15,256	$19,047	$67,770	$228,150	$76,050	$14,719	$60,733	$109,032	$0
Total Ground Water Sweep Costs	**$726,870**												
III. Reverse Osmosis Costs													
PV's Required	4	4	4	4	4	4	4	4	4	4	4	4	4
Total Kgals for Treatment	27610	125581	231567	5907	40691	50803	180764	608546	202849	39261	161994	290822	0
Reverse Osmosis Unit Cost ($/Kgal)	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60
Subtotal Reverse Osmosis Costs per Wellfield	$16,511	$75,097	$138,477	$3,533	$24,333	$30,380	$108,097	$363,910	$121,303	$23,478	$96,872	$173,912	$0
Total Reverse Osmosis Costs	**$1,175,903**												
IV. Bioremediation/Chemical Reductant Costs													
Total Kgals for Treatment (2 Pore Volumes)	0	62790	115784	2954	20346	25402	90382	304273	101424	19631	80997	145411	0
Chemical Reductant Unit Cost ($/Kgal)	$0.32	$0.32	$0.32	$0.32	$0.32	$0.32	$0.32	$0.32	$0.32	$0.32	$0.32	$0.32	$0.32
Subtotal Chemical Reductant Costs per Wellfield	$0	$20,093	$37,051	$945	$6,511	$8,128	$28,922	$97,367	$32,456	$6,282	$25,919	$46,532	$0
Total Chemical Reductant Costs	**$310,206**												
VI. Monitoring and Sampling Costs													
A. Restoration Well Sampling													
Estimated Restoration Period (Years)	5	5	5	5	2	5	5	5	5	5	5	5	5
1. Well Sampling prior to restoration start (Guideline 8)													
# of Wells	0	20	31	5	7	9	31	21	12	4	6	6	6
$/sample	$200	$200	$200	$200	$200	$200	$200	$200	$200	$200	$200	$200	$200

Ground Water Restoration	Mine Unit-A	Mine Unit-B	Mine Unit-C	C-19N Pattern	C-Haul. Drifts	Mine Unit-D	Mine Unit-E	Mine Unit-F	Mine Unit-H	Mine Unit-D Ext.	Mine Unit-I	Mine Unit-J	Mine Unit-JA
2. Restoration Progress Sampling (short list)													
# of Wells	0	20	31	5	7	9	31	21	12	4	6	12	
$/sample	$70	$70	$70	$70	$70	$70	$70	$70	$70	$70	$70	$70	$70
Samples/Year	6	6	6	6	6	6	6	6	6	6	6	6	
3. UCL Sampling													
# of Wells	0	70	78	5	20	29	55	89	69	16	33	69	
$/sample	$50	$50	$50	$50	$50	$50	$50	$50	$50	$50	$50	$50	$50
Samples/Year	6	6	6	6	6	6	6	6	6	6	6	6	
Sub-total Restoration Analyses	$0	$151,000	$188,300	$19,000	$19,280	$64,200	$153,800	$181,800	$131,100	$33,200	$63,300	$129,900	$1,200
B. Short-term Stability													
Estimated Stabilization Period (Year)	1	1	1	1	1	1	1	1	1	1	1	1	1
# of Wells	5	20	31	6	2	9	31	21	12	4	6	6	
Samples/Year	6	6	6	6	6	6	6	6	6	6	6	6	
$/sample (Short list)	$70	$70	$70	$70	$70	$70	$70	$70	$70	$70	$70	$70	$70
# of Wells	5	20	31	6	2	9	31	21	12	4	6	6	
Samples/Year	2	2	2	2	2	2	2	2	2	2	2	2	
$/sample (Guideline 8)	$200	$200	$200	$200	$200	$200	$200	$200	$200	$200	$200	$200	$200
Sub-total Short-term Stability Analyses	$4,100	$16,400	$25,420	$4,920	$1,640	$7,380	$25,420	$17,220	$9,840	$3,280	$4,920	$4,920	$0
Subtotal Monitoring and Sampling Costs per Wellfield	$4,100	$167,400	$213,720	$23,920	$20,920	$71,580	$179,220	$199,020	$140,940	$36,480	$68,220	$134,820	
Total Monitoring and Sampling Costs	**$1,260,340**												
VII. Mechanical Integrity Test (MIT) Costs													
Five Year MIT Unit Cost ($/well)	$180	$180	$180	$180	$180	$180	$180	$180	$180	$180	$180	$180	$180
Number of Wells (30% of Inj. and Rest. Wells	19	105	109		0	27	92	275	98	20	71	72	0
Subtotal Mechanical Integrity Testing Costs per Wellfield	$3,402	$18,846	$19,548	$0	$0	$4,914	$16,578	$49,572	$17,658	$3,618	$12,744	$12,960	$0
Total Mechanical Integrity Testing Cost	**$159,840**												
TOTAL RESTORATION COSTS PER WELLFIELD	$24,013	$328,517	$495,613	$30,613	$67,020	$134,049	$400,587	$938,019	$388,407	$84,577	$264,488	$477,256	$0
TOTAL WELLFIELD RESTORATION COST	**$3,633,159**												
VIII. Building Utility Costs	**Central Plant**	**Main Office**	**Satellite No.1**	**Satellite No.2**	**Satellite No.3**								
Electricity ($/Month)	$0	$0	$0	$8,500	$8,500								
Number of Months	0	60	6	48	48								
Subtotal Utility Costs per Building	$0	$0	$0	$408,000	$408,000								
Total Building Utility Costs	**$816,000**												

Ground Water Restoration																		
IX.	**Irrigation Maintenance and Monitoring Costs**				**Irrigator No.1**	**Irrigator No.2**												
	A.	Irrigation Maintenance and Repair																
		Irrigation Operation Months/Year			6	6												
		Cost per Month			$667	$667												
		Total Number of Years			5	5												
		Subtotal Maintenance and Repair Costs			$20,010	$20,010												
	B.	Irrigation Monitoring and Sampling																
		# of Irrigation Fluid Samples/Year			6	6												
		Cost/sample			$108	$108												
		# of Vegetation Samples/Year			4	4												
		Cost/sample			$200	$200												
		# of Soil Samples/Year			28	32												
		Cost/sample			$176	$176												
		# of Soil Water Samples/Year			12	2												
		Cost/sample			$108	$108												
		Total Number of Years			5	5												
		Subtotal Sampling Costs			$38,360	$36,480												
	Subtotal Maintenance and Monitoring Costs per Irrigator				$58,370	$56,490												
	Total Irrigation Maintenance and Monitoring Costs				**$114,860**													
X.	**Capital Costs (RO Purchase)**																	
	Purchase/Installation Costs for 1X400 gpm RO Capacity				$600,000													
	Total Capital Costs				**$1,200,000**													
XI.	**Vehicle Operation Costs**																	
	Number of Pickup Trucks/Pulling Units (Gas)				0													
	Unit Cost in $/hr (WDEQ Guideline No.12, Table D-1)				$0.00													
	Unit Cost in $/hr (July 1998 dollars w/o escalator)				$0.00	The SR surety has 10 trucks for 4 years identified - it is unlikely a need for an additional 10												
	Average Operating Time (Hrs/Year)				0	trucks would be needed thus these line items will be (												
	Total Number of Years (Average)				0													
	Total Vehicle Operation Costs				**$0**													
XII.	**Labor Costs**																	
	Number of Environmental Managers/RSOs				0.5													
	$/Year (1/2 costs to Highland, 1/2 costs to Smith Ranch)				$100,000													
	Number of Restoration Managers				0.5													
	$/Year (1/2 costs to Highland, 1/2 costs to Smith Ranch)				$80,000													
	Number of Environmental Technicians				2													
	$/Year				$34,000													
	Number of Operators/Laborers				7													
	$/Year				$34,000													
	Number of Maintenance Technicians				2													
	$/Year				$34,000													
	Number of Years				5													
	Total Labor Costs				**$2,320,000**													
TOTAL GROUND WATER RESTORATION COSTS					**$8,084,019**													

Equipment Removal and Loading	Central Plant	Satellite No.1	Satellite No.2	Satellite No.3
I. Removal and Loading Costs				
A. Tankage				
Number of Tanks	26	8	14	18
Volume of Tank Construction Material (ft^3)	1028	162	290	397
1. Labor				
Number of Persons	3	3	3	3
Ft^3/Day	25	25	25	25
Number of Days	41	6	12	16
$/Day/Person	$120	$120	$120	$120
Subtotal Labor Costs	$14,760	$2,160	$4,320	$5,760
2. Equipment				
Number of Days	41	6	12	16
$/Day	$338	$338	$338	$338
Subtotal Equipment Costs	$13,858	$2,028	$4,056	$5,408
Subtotal Tankage Removal and Loading Costs	$28,618	$4,188	$8,376	$11,168
B. PVC Pipe				
PVC Pipe Footage	5000	1000	4000	4000
Average PVC Pipe Diameter (inches)	3	3	3	3
Shredded PVC Pipe Volume Reduction (ft^3/ft)	0.016	0.016	0.016	0.016
Volume of Shredded PVC Pipe (ft^3)	80	16	64	64
1. Labor				
Number of Persons	2	2	2	2
Ft/Day	200	200	200	200
Number of Days	25	5	20	20
$/Day/Person	$120	$120	$120	$120
Subtotal Labor Costs	$6,000	$1,200	$4,800	$4,800
Subtotal PVC Pipe Removal and Loading Costs	$6,000	$1,200	$4,800	$4,800
C. Pumps				
Number of Pumps	50	10	14	13
Average Volume (ft^3/pump)	4.93	4.93	4.93	4.93
Volume of Pumps (ft^3)	246.5	49.3	69.02	64.09
1. Labor				
Number of Persons	1	1	1	1
Pumps/Day	2	2	2	2
Number of Days	25	5	7	7
$/Day/Person	$120	$120	$120	$120
Subtotal Labor Costs	$3,000	$600	$840	$840
Subtotal Pump Removal and Loading Costs	$3,000	$600	$840	$840
D. Dryer				
Dryer Volume (ft^3)	885	0	0	0
1. Labor				
Number of Persons	5	0	0	0
Ft^3/Day	175	0	0	0
Number of Days	5	0	0	0
$/Day/Person	$120	$120	$120	$120
Total Labor Cost	$3,000	$0	$0	$0
Total Dryer Dismantling and Loading Cost	$3,000	$0	$0	$0
E. RO Units				
Number of RO Units				

Equipment Removal and Loading	**Central Plant**	**Satellite No.1**	**Satellite No.2**	**Satellite No.3**
Current	0	3	0	0
Planned	0	0	1	1
Average Volume (ft^3/RO Unit)	250	250	250	250
1. Labor				
Number of Persons	2	2	2	2
Number of Days	0	1.5	0.5	0.5
$/Day/Person	$120	$120	$120	$120
Subtotal Labor Costs	$0	$360	$120	$120
Subtotal RO Unit Removal and Loading Costs	$0	$360	$120	$120
Subtotal Equipment Removal and Loading Costs per Facility	$40,618	$6,348	$14,136	$16,928
Total Equipment Removal and Loading Costs	**$78,030**			
II. Transportation and Disposal Costs (NRC-Licensed Facility)				
A. Tankage				
Volume of Tank Construction Material (ft^3)	1028	162	290	397
Volume for Disposal Assuming 10% Void Space (ft^3)	1131	178	319	436
Transportation and Disposal Unit Cost ($/$ft^3$)	$12.00	$12.00	$12.00	$12.00
Subtotal Tankage Transportation and Disposal Costs	$13,572	$2,136	$3,828	$5,232
B. PVC Pipe				
Volume of Shredded PVC Pipe (ft^3)	80	16	64	64
Volume for Disposal Assuming 10% Void Space (ft^3)	88	18	70	70
Transportation and Disposal Unit Cost ($/$ft^3$)	$12.00	$12.00	$12.00	$12.00
Subtotal PVC Pipe Transportation and Disposal Costs	$1,056	$216	$840	$840
C. Pumps				
Volume of Pumps (ft^3)	246.5	49.3	69.02	64.09
Volume for Disposal Assuming 10% Void Space (ft^3)	271	54	76	70
Transportation and Disposal Unit Cost ($/$ft^3$)	$12.00	$12.00	$12.00	$12.00
Subtotal Pump Transportation and Disposal Costs	$3,252	$648	$912	$840
D. Dryer				
Dryer Volume (ft^3)	885	0	0	0
Volume for Disposal Assuming Dryer Remains Intact (ft^3)	885	0	0	0
Transportation and Disposal Unit Cost ($/$ft^3$)	$12.00	$12.00	$12.00	$12.00
Total Dryer Transportation and Disposal Costs	$10,620	$0	$0	$0
E. RO Units				
Volume of RO Units (ft^3)	0	750	250	250
Volume for Disposal Assuming 50% Volume Reduction (ft^3)	0	375	125	125
Transportation and Disposal Unit Cost ($/$ft^3$)	$12.00	$12.00	$12.00	$12.00
Subtotal RO Unit Transportation and Disposal Costs	$0	$4,500	$1,500	$1,500
Subtotal Equipment Transportation and Disposal Costs per Facility	$28,500	$7,500	$7,080	$8,412
Total Equipment Transportation and Disposal Costs	**$51,492**			
III. Health and Safety Costs				
Radiation Safety Equipment	$1,250	$1,250	$1,250	$1,250
Total Health and Safety Costs	**$5,000**			
SUBTOTAL EQUIPMENT REMOVAL AND DISPOSAL COSTS PER FACILITY	$70,368	$15,098	$22,466	$26,590
TOTAL EQUIPMENT REMOVAL AND DISPOSAL COSTS	**$134,522**			

Building Demolition and Disposal	Central Plant	Dryer Building	Satellite No. 1	Satellite No. 2	Satellite No. 3	Sat. No.3 Fab. Shop	Yellow Cake Warehouse	South Warehouse	Suspended Walkway
I. Decontamination Costs									
A. Wall Decontamination									
Area to be Decontaminated (ft^2)	131000	0	0	0	0	0	0	0	0
HCl Acid Wash, including labor ($/$ft^2$)	$0.64	$0.64	$0.64	$0.64	$0.64	$0.64	$0.64	$0.64	$0.64
Subtotal Wall Decontamination Costs	$83,185	$0	$0	$0	$0	$0	$0	$0	$0
B. Concrete Floor Decontamination									
Area to be Decontaminated (ft^2)	17820	0	6000	9600	9600	0	0	0	0
HCl Acid Wash, including labor ($/$ft^2$)	$0.47	$0.47	$0.47	$0.47	$0.47	$0.47	$0.47	$0.47	$0.47
Subtotal Concrete Floor Decontamination Costs	$8,375	$0	$2,820	$4,512	$4,512	$0	$0	$0	$0
C. Deep Well Injection Costs									
Total Kgals for Injection	148.82	0	6	9.6	9.6	0	0	0	0
Deep Well Injection Unit Cost ($/Kgals)	$4.13	$4.13	$4.13	$4.13	$4.13	$4.13	$4.13	$4.13	$4.13
Subtotal Deep Well Injection Costs	$614	$0	$25	$40	$40	$0	$0	$0	$0
Subtotal Decontamination Costs per Building	$92,174	$0	$2,845	$4,552	$4,552	$0	$0	$0	$0
Total Decontamination Costs	**$105,317**								
II. Demolition Costs									
A. Building									
Assumptions:									
Dryer bldg. demolition unit cost of $0.73/$ft^3$ for additional									
radiation safety equipment									
Volume of Building (ft^3)	794000	30720	192000	320000	320000	37560	91000	333000	5600
Demolition Unit Cost per WDEQ Guideline No.12,App.K ($/$ft^3$)	$0.178	$0.178	$0.178	$0.178	$0.178	$0.178	$0.178	$0.178	$0.178
Subtotal Building Demolition Costs	$141,332	$5,468	$34,176	$56,960	$56,960	$6,686	$16,198	$59,274	$997
B. Concrete Floor									
Area of Concrete Floor (ft^2)	23760	0	8000	12800	12800	0	6500	18000	0
Demolition Unit Cost per WDEQ Guideline No.12,App.K ($/$ft^2$)	$3.40	$3.40	$3.40	$3.40	$3.40	$3.40	$3.40	$3.40	$3.40
Subtotal Concrete Floor Demolition Costs	$80,784	$0	$27,200	$43,520	$43,520	$0	$22,100	$61,200	$0
C. Concrete Footing									
Length of Concrete Footing (ft)	622	0	360	480	480	0	360	580	0
Demolition Unit Cost per WDEQ Guide. No.12,App.K ($/lin. ft)	$12.22	$12.22	$12.22	$12.22	$12.22	$12.22	$12.22	$12.22	$12.22
Subtotal Concrete Footing Demolition Costs	$7,601	$0	$4,399	$5,866	$5,866	$0	$4,399	$7,088	$0
Subtotal Demolition Costs per Building	$229,717	$5,468	$65,775	$106,346	$106,346	$6,686	$42,697	$127,562	$997
Total Demolition Costs	**$847,258**								
III. Disposal Costs									
A. Building									
Volume of Building (cy)	29407	1138	7111	11852	11852	1391	3370	12333	207
1. On-Site									
Assumptions:									
On-site disposal cost of $1.25/cy									
Percentage (%)	100	0	100	100	100	100	100	100	100
Volume for Disposal (cubic yards)	29407	0	7111	11852	11852	1391	3370	12333	207
Disposal Unit Cost ($/cy)	$1.25	$1.25	$1.25	$1.25	$1.25	$1.25	$1.25	$1.25	$1.25
Subtotal On-Site Disposal Costs	$36,759	$0	$8,889	$14,815	$14,815	$1,739	$4,213	$15,417	$259
2. NRC-Licensed Facility									
Percentage (%)	0	100	0	0	0	0	0	0	0
Volume for Disposal (ft^3)	0	2624	0	0	0	0	0	0	0
Volume for Disposal Assuming 10% Void Space (ft^3)	0	2886	0	0	0	0	0	0	0
Transportation and Disposal Unit Cost ($/$ft^3$)	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00

Building Demolition and Disposal	Central Plant	Dryer Building	Satellite No. 1	Satellite No. 2	Satellite No. 3	Sat. No.3 Fab. Shop	Yellow Cake Warehouse	South Warehouse	Suspended Walkway
Subtotal NRC-Licensed Facility Disposal Costs	$0	$34,632	$0	$0	$0	$0	$0	$0	$0
Subtotal Building Disposal Costs	$36,759	$34,632	$8,889	$14,815	$14,815	$1,739	$4,213	$15,417	$259
B. Concrete Floor									
Area of Concrete Floor (ft^2)	23760	0	8000	12800	12800	0	6500	18000	0
Average Thickness of Concrete Floor (ft)	0.75	0	0.67	0.67	0.67	0	0.5	0.5	0
Volume of Concrete Floor (ft^3)	17820	0	5360	8576	8576	0	3250	9000	0
Volume of Concrete Floor (cy)	660	0	199	318	318	0	120	333	0
1. On-Site									
Percentage (%)	75	0	75	75	75	0	100	100	0
Volume for Disposal (cy)	495	0	149	238	238	0	120	333	0
Disposal Unit Cost per WDEQ Guideline No.12,App.K ($/cy)	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39
Subtotal On-Site Disposal Costs	$3,163	$0	$951	$1,522	$1,522	$0	$769	$2,130	$0
2. NRC-Licensed Facility									
Assumptions:									
Additional $2.60/$ft^3$ for segregation of concrete									
Percentage (%)	25	0	25	25	25	0	0	0	0
Volume for Disposal (ft^3)	4455	0	1340	2144	2144	0	0	0	0
Segregation and Loading Unit Cost ($/$ft^3$)	$2.60	$2.60	$2.60	$2.60	$2.60	$2.60	$2.60	$2.60	$2.60
Transportation and Disposal Unit Cost ($/$ft^3$)	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00
Subtotal NRC-Licensed Facility Disposal Costs	$65,043	$0	$19,564	$31,302	$31,302	$0	$0	$0	$0
Subtotal Concrete Floor Disposal Costs	$68,206	$0	$20,515	$32,824	$32,824	$0	$769	$2,130	$0
C. Concrete Footing									
Length of Concrete Footing (ft)	622	0	360	480	480	0	360	580	0
Average Depth of Concrete Footing (ft)	4	4	4	4	4	4	4	4	0
Average Width of Concrete Footing (ft)	1	1	1	1	1	1	1	1	0
Volume of Concrete Footing (ft^3)	2488	0	1440	1920	1920	0	1440	2320	0
Volume of Concrete Footing (cy)	92	0	53	71	71	0	53	86	0
Disposal Unit Cost per WDEQ Guideline No.12,App.K ($/cy)	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39
Subtotal Concrete Footing Disposal Costs	$589	$0	$341	$454	$454	$0	$341	$549	$0
Subtotal Disposal Costs per Building	$105,554	$34,632	$29,745	$48,093	$48,093	$1,739	$5,323	$18,096	$259
Total Disposal Costs	**$309,512**								
III. Health and Safety Costs									
Radiation Safety Equipment	$1,000	$1,000	$1,000	$1,000	$1,000	$0	$0	$0	$0
Total Health and Safety Costs	**$5,000**								
SUBTOTAL BUILDING DEMOLITION AND DISPOSAL COSTS	$428,445	$41,100	$99,365	$159,991	$159,991	$8,425	$48,020	$145,658	$1,256
TOTAL BUILDING DEMOLITION AND DISPOSAL COSTS	**$1,267,087**								

Building Demolition and Disposal	Changehouse and Lab Bldg.	Maintenance Building	Main Office	Office Trailers	Process/Fire Water Bldg.	Potable Water Bldg.	Potable Water Tank Slab	Central Plant Tank Slabs
I. Decontamination Costs								
A. Wall Decontamination								
Area to be Decontaminated (ft^2)	0	0	0	0	0	0	0	0
HCl Acid Wash, including labor ($/$ft^2$)	$0.64	$0.64	$0.64	$0.64	$0.64	$0.64	$0.64	$0.64
Subtotal Wall Decontamination Costs	$0	$0	$0	$0	$0	$0	$0	$0
B. Concrete Floor Decontamination								
Area to be Decontaminated (ft^2)	0	0	0	0	0	0	0	0
HCl Acid Wash, including labor ($/$ft^2$)	$0.47	$0.47	$0.47	$0.47	$0.47	$0.47	$0.47	$0.47
Subtotal Concrete Floor Decontamination Costs	$0	$0	$0	$0	$0	$0	$0	$0
C. Deep Well Injection Costs								
Total Kgals for Injection	0	0	0	0	0	0	0	0
Deep Well Injection Unit Cost ($/Kgals)	$4.13	$4.13	$4.13	$4.13	$4.13	$4.13	$4.13	$4.13
Subtotal Deep Well Injection Costs	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Decontamination Costs per Building	$0	$0	$0	$0	$0	$0	$0	$0
Total Decontamination Costs								
II. Demolition Costs								
A. Building								
Assumptions:								
Dryer bldg. demolition unit cost of $0.73/$ft^3$ for additional								
radiation safety equipment								
Volume of Building (ft^3)	73000	27000	72000	20000	16500	6300	0	0
Demolition Unit Cost per WDEQ Guideline No.12,App.K ($/$ft^3$)	$0.178	$0.178	$0.178	$0.178	$0.178	$0.178	$0.178	$0.178
Subtotal Building Demolition Costs	$12,994	$4,806	$12,816	$3,560	$2,937	$1,121	$0	$0
B. Concrete Floor								
Area of Concrete Floor (ft^2)	5400	2100	6000	0	800	180	1256	7854
Demolition Unit Cost per WDEQ Guideline No.12,App.K ($/$ft^2$)	$3.40	$3.40	$3.40	$3.40	$3.40	$3.40	$3.40	$3.40
Subtotal Concrete Floor Demolition Costs	$18,360	$7,140	$20,400	$0	$2,720	$612	$4,270	$26,704
C. Concrete Footing								
Length of Concrete Footing (ft)	300	200	340	0	120	54	0	0
Demolition Unit Cost per WDEQ Guide. No.12,App.K ($/lin. ft)	$12.22	$12.22	$12.22	$12.22	$12.22	$12.22	$12.22	$12.22
Subtotal Concrete Footing Demolition Costs	$3,666	$2,444	$4,155	$0	$1,466	$660	$0	$0
Subtotal Demolition Costs per Building	$35,020	$14,390	$37,371	$3,560	$7,123	$2,393	$4,270	$26,704
Total Demolition Costs								
III. Disposal Costs								
A. Building								
Volume of Building (cy)	2704	1000	2667	741	611	233	0	0
1. On-Site								
Assumptions:								
On-site disposal cost of $1.25/cy								
Percentage (%)	100	100	100	100	100	100	0	0
Volume for Disposal (cubic yards)	2704	1000	2667	741	611	233	0	0
Disposal Unit Cost ($/cy)	$1.25	$1.25	$1.25	$1.25	$1.25	$1.25	$1.25	$1.25
Subtotal On-Site Disposal Costs	$3,380	$1,250	$3,333	$926	$764	$292	$0	$0
2. NRC-Licensed Facility								
Percentage (%)	0	0	0	0	0	0	0	0
Volume for Disposal (ft^3)	0	0	0	0	0	0	0	0
Volume for Disposal Assuming 10% Void Space (ft^3)	0	0	0	0	0	0	0	0
Transportation and Disposal Unit Cost ($/$ft^3$)	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00

Building Demolition and Disposal	Changehouse and Lab Bldg.	Maintenance Building	Main Office	Office Trailers	Process/Fire Water Bldg.	Potable Water Bldg.	Potable Water Tank Slab	Central Plant Tank Slabs
Subtotal NRC-Licensed Facility Disposal Costs	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Building Disposal Costs	$3,380	$1,250	$3,333	$926	$764	$292	$0	$0
B. Concrete Floor								
Area of Concrete Floor (ft^2)	5400	2100	6000	0	800	180	1256	7854
Average Thickness of Concrete Floor (ft)	0.5	0.5	0.5	0	0.5	0.5	1	1
Volume of Concrete Floor (ft^3)	2700	1050	3000	0	400	90	1256	7854
Volume of Concrete Floor (cy)	100	39	111	0	15	3	47	291
1. On-Site								
Percentage (%)	100	100	100	0	100	100	100	100
Volume for Disposal (cy)	100	39	111	0	15	3	47	291
Disposal Unit Cost per WDEQ Guideline No.12,App.K ($/cy)	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39
Subtotal On-Site Disposal Costs	$639	$249	$710	$0	$95	$21	$297	$1,859
2. NRC-Licensed Facility								
Assumptions:								
Additional $2.60/$ft^3$ for segregation of concrete								
Percentage (%)	0	0	0	0	0	0	0	0
Volume for Disposal (ft^3)	0	0	0	0	0	0	0	0
Segregation and Loading Unit Cost ($/$ft^3$)	$2.60	$2.60	$2.60	$2.60	$2.60	$2.60	$2.60	$2.60
Transportation and Disposal Unit Cost ($/$ft^3$)	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00
Subtotal NRC-Licensed Facility Disposal Costs	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Concrete Floor Disposal Costs	$639	$249	$710	$0	$95	$21	$297	$1,859
C. Concrete Footing								
Length of Concrete Footing (ft)	300	200	340	0	120	54	0	0
Average Depth of Concrete Footing (ft)	4	4	4	0	4	4	4	4
Average Width of Concrete Footing (ft)	1	1	1	0	1	1	1	1
Volume of Concrete Footing (ft^3)	1200	800	1360	0	480	216	0	0
Volume of Concrete Footing (cy)	44	30	50	0	18	8	0	0
Disposal Unit Cost per WDEQ Guideline No.12,App.K ($/cy)	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39
Subtotal Concrete Footing Disposal Costs	$284	$189	$322	$0	$114	$51	$0	$0
Subtotal Disposal Costs per Building	$4,303	$1,688	$4,365	$926	$973	$364	$297	$1,859
Total Disposal Costs								
III. Health and Safety Costs								
Radiation Safety Equipment	$0	$0	$0	$0	$0	$0	$0	$0
Total Health and Safety Costs								
SUBTOTAL BUILDING DEMOLITION AND DISPOSAL COSTS	$39,323	$16,078	$41,736	$4,486	$8,096	$2,757	$4,567	$28,563
TOTAL BUILDING DEMOLITION AND DISPOSAL COSTS								

Wellfield Buildings and Equipment Removal and Disposal	Mine Unit-A	Mine Unit-B	Mine Unit-C	Mine Unit-D	Mine Unit-E	Mine Unit-F	Mine Unit-H	Mine Unit-D Ext.	Mine Unit-I	Mine Unit-J	Mine Unit-JA
I. Wellfield Piping											
Assumptions:											
Number of Header Houses per Wellfield	5	18	20	4	15	43	10	3	6	7	
Length of Piping per Header House (ft)	15000	15000	15000	15000	15000	15000	15000	15000	15000	12500	
Total Length of Piping (ft)	75000	270000	300000	60000	225000	645000	150000	45000	90000	87500	
A. Removal and Loading											
Wellfield Piping Removal Unit Cost ($/ft of pipe)	$0.42	$0.42	$0.42	$0.42	$0.42	$0.42	$0.42	$0.42	$0.42	$0.42	$0.42
Subtotal Wellfield Piping Removal and Loading Costs	$31,500	$113,400	$126,000	$25,200	$94,500	$270,900	$63,000	$18,900	$37,800	$36,750	$0
B. Transport and Disposal Costs (NRC-Licensed Facility)											
Average Diameter of Piping (inches)	2	2	2	2	2	2	2	2	2	2	2
Chipped Volume Reduction (ft^3/ft)	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Chipped Volume per Wellfield (ft^3)	375	1350	1500	300	1125	3225	750	225	450	437.5	0
Volume for Disposal Assuming 10% Void Space (ft^3)	413	1485	1650	330	1238	3548	825	248	495	481	0
Transportation and Disposal Unit Cost ($/$ft^3$)	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00
Subtotal Wellfield Piping Transport and Disposal Costs	$4,956	$17,820	$19,800	$3,960	$14,856	$42,576	$9,900	$2,976	$5,940	$5,772	$0
Wellfield Piping Costs per Wellfield	$36,456	$131,220	$145,800	$29,160	$109,356	$313,476	$72,900	$21,876	$43,740	$42,522	$0
C. Capitol Costs											
PVC Pipe Shredder (Cost covered in SR Surety)	$0										
Total Wellfield Piping Costs	**$946,506**										
II. Well Pumps and Tubing											
Assumptions:											
Pump and tubing removal costs included under ground water restoration labor costs											
60% of production/injection wells contain pumps and/or tubing											
A. Pump and Tubing Transportation and Disposal											
Number of Production Wells	27	141	192	45	143	465	155	30	125	122	
Number of Injection Wells	50	319	343	91	307	903	327	67	236	234	0
1. Pump Volume											
Number of Production Wells with Pumps	16	85	115	27	86	279	93	18	75	73	0
Average Pump Volume (ft^3)	1	1	1	1	1	1	1	1	1	1	1
Pump Volume per Wellfield (ft^3)	16	85	115	27	86	279	93	18	75	73	0
2. Tubing Volume											
Assumptions:											
Average tubing length/wellfield based on average well depth minus 25 ft											
Number of Production Wells with Tubing	16	85	115	27	86	279	93	18	75	73	0
Number of Injection Wells with Tubing	30	191	206	55	184	542	196	40	142	140	0
Average Tubing Length per Well (ft)	475	425	525	575	525	625	475	575	625	515	
Tubing Length per Wellfield (ft)	21850	117300	168525	47150	141750	513125	137275	33350	135625	109695	0
Diameter of Production Well Fiberglass Tubing (inches)	2	2	2	2	2	2	2	2	2	2	2
Diameter of Injection Well HDPE Tubing (inches)	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Chipped Volume Reduction (ft^3/ft)	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Chipped Volume per Wellfield (ft^3)	109	587	843	236	709	2566	686	167	678	548	0
Volume of Pump and Tubing (ft^3)	125	672	958	263	795	2845	779	185	753	621	0
Volume for Disposal Assuming 10% Void Space (ft^3)	138	739	1054	289	875	3130	857	204	828	683	0
Transportation and Disposal Unit Cost ($/$ft^3$)	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00
Subtotal Pump and Tubing Transport and Disposal Costs	$1,656	$8,868	$12,648	$3,468	$10,500	$37,560	$10,284	$2,448	$9,936	$8,196	$0
Pump and Tubing Costs per Wellfield	$1,656	$8,868	$12,648	$3,468	$10,500	$37,560	$10,284	$2,448	$9,936	$8,196	$0
Total Pump and Tubing Costs	**$105,564**										
III. Buried Trunkline	**A/B-Wellfields**			**D/E-Wellfields**							
Assumptions:											
A/B-Wellfields use the same trunkline											
D/E-Wellfields use the same trunkline											
Length of Trunkline Trench (ft)	6500		5900	12000		11700	13200	5500	10750	2500	0
A. Removal and Loading											
Main Pipeline Removal Unit Cost ($/ft of trench)	$0.89		$0.89	$0.89		$0.89	$0.89	$0.89	$0.89	$0.89	$0.89
Subtotal Trunkline Removal and Loading Costs	$5,785		$5,251	$10,680		$10,413	$11,748	$4,895	$9,568	$2,225	$0
B. Transport and Disposal Costs (NRC-Licensed Facility)											

Wellfield Buildings and Equipment Removal and Disposal	Mine Unit-A	Mine Unit-B	Mine Unit-C	Mine Unit-D	Mine Unit-E	Mine Unit-F	Mine Unit-H	Mine Unit-D Ext.	Mine Unit-I	Mine Unit-J	Mine Unit-JA
1. 3" HDPE Trunkline											
Piping Length (ft)	6500		5900	12000		11700	13200	5500	10750	0	0
Chipped Volume Reduction (ft^3/ft)	0.022		0.022	0.022		0.022	0.022	0.022	0.022	0.022	0.022
Chipped Volume (ft^3)	143		129.8	264		257.4	290.4	121	236.5	0	0
2. 6" HDPE Trunkline											
Piping Length (ft)	0		0	0		0	0	11000	3000	0	0
Chipped Volume Reduction (ft^3/ft)	0.078		0.078	0.078		0.078	0.078	0.078	0.078	0.078	0.078
Chipped Volume (ft^3)	0		0	0		0	0	858	234	0	0
3. 10" HDPE Trunkline											
Piping Length (ft)	13000		0	0		0	0	0	750	2000	0
Chipped Volume Reduction (ft^3/ft)	0.277		0.277	0.277		0.277	0.277	0.277	0.277	0.277	0.277
Chipped Volume (ft^3)	3601		0	0		0	0	0	207.75	554	0
4. 12" HDPE Trunkline											
Piping Length (ft)	0		11800	24000		0	0	0	0	2000	0
Chipped Volume Reduction (ft^3/ft)	0.293		0.293	0.293		0.293	0.293	0.293	0.293	0.293	0.293
Chipped Volume (ft^3)	0		3457.4	7032		0	0	0	0	586	0
5. 14" HDPE Trunkline											
Piping Length (ft)	0		0	0		23400	26400	0	8500	0	0
Chipped Volume Reduction (ft^3/ft)	0.359		0.359	0.359		0.359	0.359	0.359	0.359	0.359	0.359
Chipped Volume (ft^3)	0		0	0		8400.6	9477.6	0	3051.5	0	0
6 18" HDPE Trunkline											
Piping Length (ft)	0	0	0	0	0	0	0	0	0	0	0
Chipped Volume Reduction (ft^3/ft)	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Chipped Volume (ft^3)	0	0	0	0	0	0	0	0	0	0	0
Total Trunkline Chipped Volume (ft^3)	3744	0	3587.2	7296		8658	9768	979	3729.75	1140	0
Volume for Disposal Assuming 10% Void Space (ft^3)	4118		3946	8026		9524	10745	1077	4103	1254	0
Transportation and Disposal Unit Cost ($/$ft^3$)	$12.00		$12.00	$12.00		$12.00	$12.00	$12.00	$12.00	$12.00	$12.00
Subtotal Trunkline Transport and Disposal Costs	$49,416		$47,352	$96,312		$114,288	$128,940	$12,924	$49,236	$15,048	$0
Trunkline Decommissioning Costs per Wellfield	$55,201		$52,603	$106,992		$124,701	$140,688	$17,819	$58,804	$17,273	$0
Total Trunkline Decommissioning Costs	**$574,081**										
IV. Well Houses											
Total Quantity	90	490	554	136	450	1383	482	97	361	213	
Average Well House Volume (ft^3)	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
A. Removal											
Total Volume (ft^3)	1125	6125	6925	1700	5625	17287.5	6025	1212.5	4512.5	2662.5	0
Demolition Unit Cost per WDEQ Guideline No.12,App.K ($/$ft^3$)	$0.178	$0.178	$0.178	$0.178	$0.178	$0.178	$0.178	$0.178	$0.178	$0.178	$0.178
Subtotal Well House Demolition Costs	$200	$1,090	$1,233	$303	$1,001	$3,077	$1,072	$216	$803	$474	$0
B. Survey and Decontamination											
Assumptions:											
Cost per Well House	4.49	4.49	4.49	4.49	4.49	4.49	4.49	4.49	4.49	4.49	4.49
Subtotal Survey and Decontamination Costs	$404	$2,200	$2,487	$611	$2,021	$6,210	$2,164	$436	$1,621	$956	$0
C. Disposal											
Total Volume (cy)	42	227	256	63	208	640	223	45	167	99	0
Volume for Disposal Assuming 10% Void Space (cy)	46	250	282	69	229	704	245	49	184	108	0
Disposal Unit Cost per WDEQ Guideline No.12,App.K ($/cy)	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39
Subtotal On-Site Disposal Costs	$294	$1,598	$1,802	$441	$1,463	$4,499	$1,566	$313	$1,176	$690	$0
Well House Removal and Disposal Costs per Wellfield	$898	$4,888	$5,522	$1,355	$4,485	$13,786	$4,802	$965	$3,600	$2,120	$0
Total Well House Removal and Disposal Costs	**$42,421**										
VI. Header Houses											
Total Quantity	5	18	20	4	15	43	10	3	6	9	
Average Header House Volume (ft^3)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
A. Removal											
Total Volume (ft^3)	8000	28800	32000	6400	24000	68800	16000	4800	9600	14400	0
Demolition Unit Cost per WDEQ Guideline No.12,App.K ($/$ft^3$)	$0.178	$0.178	$0.178	$0.178	$0.178	$0.178	$0.178	$0.178	$0.178	$0.178	$0.178
Subtotal Building Demolition Costs	$1,424	$5,126	$5,696	$1,139	$4,272	$12,246	$2,848	$854	$1,709	$2,563	$0
B. Survey and Decontamination											

Wellfield Buildings and Equipment Removal and Disposal	Mine Unit-A	Mine Unit-B	Mine Unit-C	Mine Unit-D	Mine Unit-E	Mine Unit-F	Mine Unit-H	Mine Unit-D Ext.	Mine Unit-I	Mine Unit-J	Mine Unit-JA
Assumptions:											
Cost per Header House	$200	$200	$200	$200	$200	$200	$200	$200	$200	$200	$200
Subtotal Survey and Decontamination Costs	$1,000	$3,600	$4,000	$800	$3,000	$8,600	$2,000	$600	$1,200	$1,800	$0
C. Disposal											
Total Volume (cy)	296	1067	1185	237	889	2548	593	178	356	533	0
Volume for Disposal Assuming 10% Void Space (cy)	326	1173	1304	261	978	2803	652	196	391	587	0
Disposal Unit Cost per WDEQ Guideline No.12,App.K ($/cy)	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39	$6.39
Subtotal On-Site Disposal Costs	$2,083	$7,495	$8,333	$1,668	$6,249	$17,911	$4,166	$1,252	$2,498	$3,751	$0
Header House Removal and Disposal Costs per Wellfield	$4,507	$16,221	$18,029	$3,607	$13,521	$38,757	$9,014	$2,706	$5,407	$8,114	$0
Total Header House Removal and Disposal Costs	**$119,883**										
TOTAL REMOVAL AND DISPOSAL COSTS PER WELLFIELD	$98,718	$161,197	$234,602	$144,582	$137,862	$528,280	$237,688	$45,814	$121,487	$78,225	$0
TOTAL WELLFIELD BUILDINGS AND EQUIPMENT REMOVAL AND DISPOSAL COSTS	**$1,788,455**										

Well Abandonment					Mine Unit-A	Mine Unit-B	Mine Unit-C	Mine Unit-D	Mine Unit-E	Mine Unit-F	Mine Unit-H	Mine Unit-D Ext.	Mine Unit-I	Mine Unit-J	Mine Unit-JA
I.	**Well Abandonment (Wellfields)**														
	# of Production Wells				0	141	192	45	143	465	155	30	125	120	
	# of Injection Wells				0	319	343	91	307	903	327	67	236	240	
	# of Monitoring Wells				0	67	78	38	86	134	81	20	39	41	
	#of Restoration Wells				0	30	19	0	0	15	0	0	0	0	0
	Total Number of Wells				0	557	632	174	536	1517	563	117	400	401	0
	Average Diameter of Casing (inches)				5	5	5	5	5	5	5	5	5	5	4.5
	Average Depth (ft)				500	450	550	600	550	650	500	600	650	540	500
	Well Abandonment Unit Cost ($/well)				$359	$354	$365	$370	$365	$375	$359	$370	$375	$365	$359
	Subtotal Abandonment Cost per Wellfield				$0	$197,173	$230,369	$64,339	$195,376	$568,913	$202,258	$43,263	$150,010	$146,168	$0
	Total Wellfield Abandonment Costs				**$1,797,869**										
II.	**Waste Disposal Well Abandonment**				**Morton No.1-20**	**Vollman No.33-27**	(Construction not anticipated)								
	A.	Well Plugging													
		Lump Sum cost			$77,763	$0									
		Subtotal Well Plugging Costs per Well			$77,763	$0									
	B.	Pump Dismantling and Decontamination													
		Number of Persons			2	0									
		Number of Pumps			2	0									
		Pumps/Day			0.5	0									
		Number of Days			4	0									
		$/Day/Person			$120	$0									
		Subtotal Dismantling and Decon Costs per Well			$960	$0									
	C.	Tubing String Disposal (NRC-Licensed Facility)													
		Length of Tubing String (ft)			9000	0									
		Diameter of Tubing String (inches)			2.875	0									
		Volume of Tubing String (ft^3)			406	0									
		Transportation and Disposal Unit Cost ($/$ft^3$)			$12.00	$0.00									
		Subtotal Tubing String Disposal Costs per Well			$4,866	$0									
	Subtotal Waste Disposal Well Abandonment Costs per Well				$83,589	$0									
	Total Waste Disposal Well Abandonment Costs				**$83,589**										
TOTAL WELL ABANDONMENT COSTS					**$1,881,458**										

Wellfield and Satellite Surface Reclamation	Mine Unit-A/B	Mine Unit-C	Mine Unit-D	Mine Unit-E	Mine Unit-F	Mine Unit-H	Mine Unit-D Ext.	Mine Unit-I	Mine Unit-J	Mine Unit-JA
I. Wellfield Pattern Area Reclamation										
Pattern Area (acres)	20	31	6.5	23	77	26	5	21	28	0
Disking/Seeding Unit Cost ($/acre)	$235	$235	$235	$235	$235	$235	$235	$235	$235	$235
Subtotal Pattern Area Reclamation Costs per Wellfield	$4,700	$7,285	$1,528	$5,405	$18,095	$6,110	$1,175	$4,935	$6,580	$0
Total Wellfield Pattern Area Reclamation Costs	**$55,813**									
II. Wellfield Road Reclamation										
A. Road Construction Before January 1, 1997										
Length of Wellfield Roads (1000 ft)	12.2	11.3	2.4	13.3	15	0	0	0	0	0
Wellfield Road Reclamation Unit Cost ($/1000 ft)	$802	$802	$802	$802	$802	$802	$802	$802	$802	$802
Subtotal Pre-1997 Wellfield Road Reclamation Costs	$9,784	$9,063	$1,925	$10,667	$12,030	$0	$0	$0	$0	$0
B. Road Construction After January 1, 1997										
Length of Wellfield Roads (1000 ft)	0.6	0	0	0	3	15.7	5	5	5	
Wellfield Road Reclamation Unit Cost ($/1000 ft)	$403	$403	$403	$403	$403	$403	$403	$403	$403	$403
Subtotal Post-1997 Wellfield Road Reclamation Costs	$242	$0	$0	$0	$1,209	$6,327	$2,015	$2,015	$2,015	$0
Subtotal Road Reclamation Costs per Wellfield	$10,026	$9,063	$1,925	$10,667	$13,239	$6,327	$2,015	$2,015	$2,015	$0
Total Wellfield Road Reclamation Costs	**$57,292**									
SUBTOTAL SURFACE RECLAMATION COSTS PER WELLFIELD	$14,726	$16,348	$3,453	$16,072	$31,334	$12,437	$3,190	$6,950	$8,595	$0
TOTAL WELLFIELD SURFACE RECLAMATION COSTS	**$113,105**									
III. Satellite Area Reclamation	**Satellite No.1**	**Satellite No.2**	**Satellite No.3**							
Assumptions:										
Area of Disturbance (acres)	1	1	1							
Average Depth of Stripped Topsoil (ft)	1	0.67	0.67							
Surface Grade: Level Ground										
Average Length of Topsoil Haul (ft)	1000	500	500							
A. Ripping Overburden with Dozer										
Ripping Unit Cost per WDEQ Guideline No.12, App.I1 ($/acre)	$814.22	$814.22	$814.22							
Subtotal Ripping Costs	$814	$814	$814							
B. Topsoil Application with Scraper										
Volume of Topsoil Removed (cy)	1613	1081	1081							
Application Unit Cost per WDEQ Guideline No.12, App.C ($/cy) NC	$0.71	$0.60	$0.60							
Subtotal Topsoil Application Costs	$1,145	$649	$649							
C. Discing and Seeding										
Discing/Seeding Unit Cost ($/acre)	$235	$235	$235							
Subtotal Discing/Seeding Costs	$235	$235	$235							
Subtotal Surface Reclamation Costs per Satellite	$2,194	$1,698	$1,698							
Total Satellite Building Area Reclamation Costs	**$5,590**									
TOTAL WELLFIELD AND SATELLITE SURFACE RECLAMATION COSTS	**$118,695**									

Miscellaneous Reclamation													
I.	**CPF/Office Area Reclamation**												
		Assumptions											
			Concrete, asphalt, and building material used to backfill low areas										
			No topsoil salvaged or applied (area is pre-law)										
			CPF/Office area = 10 acres										
	A.	Ripping and Hauling Asphalt											
			Assumptions										
				Average haul distance (ft)					500				
				Surface grade (%)					0%				
				Average Thickness of Asphalt (ft)					0.5				
			Surface Area (acres)						3.4				
			Ripping Unit Cost per WDEQ Guideline No.12, App.I ($/acre)						$814.22				
			Volume of Asphalt (cy)						2743				
			Hauling Unit Cost per WDEQ Guideline No.12, App.C ($/cy)						$0.73				
		Total Asphalt Ripping and Hauling Cost							$4,757				
	B.	Borrow Cover											
		1.	Topsoil Removal/Replacement										
				Assumptions									
					Surface area of borrow area (acres)				3				
					Six inches of topsoil removed and replaced at borrow area								
				Volume of topsoil (cy)					2420				
				Topsoil Removal/Replacement Unit Cost ($/cy)					$1.00				
			Total Topsoil Removal/Replacement Cost						$2,420				
		2.	Borrow Application										
				Assumptions									
					Final borrow cover depth will range from 0 to 4 ft, average = 1 ft								
					Average haul distance = 1000 ft								
					Surface grade (%)				0%				
				Borrow Volume (cy)					16133				
				Borrow Cover Unit Cost per WDEQ Guideline No.12, App.C ($/cy)					$0.87				
			Total Borrow Application Cost						$13,971				
		Total Borrow Cover Cost							$16,391				
	C.	Discing/Seeding											
			Assumptions										
				Includes discing/seeding of borrow area (3 acres)									
			Surface Area (acres)						13				
			Discing/Seeding Unit Cost ($/acre)						$235				
		Total Discing/Seeding Costs							$3,055				
	Total CPF/Office Area Reclamation								**$24,203**				
II.	**Access Road Reclamation**								**CPF/Office Area**	**Sat No. 1**	**Sat No. 3**	**Connecting Road**	
	A.	Assumptions											
			CPF/Office Area Road is pre-law (no topsoil applied)										
			Surface grade						5%	0%	0%	0%	
		Length of road (miles)							2.5	3	1	2	
		Average road width (ft)							25	30	30	30	
	B.	Ripping and Hauling Asphalt											
			Assumptions										
				Average haul distance (miles)					1.25	0	0	0	
				Average Thickness of Asphalt (ft)					0.5	0	0	0	
			Asphalt Surface Area (acres)						7.6	0.0	0.0	0.0	
			Ripping Unit Cost per WDEQ Guideline No.12, App.I ($/acre)						$577.96	$577.96	$577.96	$577.96	
			Volume of Asphalt (cy)						6111	0	0	0	
			Hauling Unit Cost per WDEQ Guideline No.12, App.C ($/cy)						$2.18	$0.00	$0.00	$0.00	
		Subtotal Asphalt Ripping and Hauling Costs							$17,701	$0	$0	$0	
	B.	Gravel Road Base Removal											
			Assumptions										
				Average haul distance (ft)					0	1000	1000	1000	
			Gravel Road Base Width (ft)						0	14	14	14	
			Gravel Road Base Area (acres)						0.0	5.1	1.7	3.4	
			Average Road Base Depth (ft)						0	0.5	0.5	0.5	
			Volume of Road Base (cy)						0	4107	1369	2738	
			Removal Unit Cost per WDEQ Guideline No.12, App.C ($/cy)						$0.87	$0.87	$0.87	$0.87	
		Subtotal Gravel Road Base Removal Costs							$0	$3,556	$1,185	$2,371	
	C.	Ripping Overburden with Dozer											
			Overburden Surface Area (acres)						0.0	10.9	3.6	7.3	
			Ripping Unit Cost per WDEQ Guideline No.12, App.I1 ($/acre)						$814.22	$814.22	$814.22	$814.22	
		Subtotal Ripping Overburden Costs							$0	$8,882	$2,961	$5,922	
	D.	Topsoil Application											
			Assumptions										
				Average haul distance (ft)					0	5000	1500	1500	
			Topsoil Surface Area (ft^2)						0	475200	158400	316800	
			Depth of Topsoil (ft)						0	0.5	0.5	0.5	
			Volume of Topsoil (cy)						0	8800	2933	5867	
			Topsoil Unit Cost per WDEQ Guideline No.12, App.C ($/cy)						$0.00	$1.82	$0.99	$0.99	
		Subtotal Topsoil Application Costs							$0	$16,051	$2,913	$5,827	
	E.	Discing/Seeding											
			Assumptions										

Miscellaneous Reclamation													
			Surface Area (acres)				7.6	10.9	3.6	7.3		
			Discing/Seeding Unit Cost ($/acre)				$235	$235	$235	$235		
		Subtotal Discing/Seeding Costs					$1,780	$2,564	$855	$1,709		
	Subtotal Reclamation Costs per Access Road						$19,481	$31,053	$7,914	$15,829		
	Total Access Road Reclamation Costs						**$74,277**					
III.	**Wastewater Pipeline Reclamation**						**SAT2 to SAT1 WW Pipeline**	**SAT3 to SAT2 PSR**	**H-WF Rest. Bypass**			
	A.	Pipeline Removal and Loading										
			Length of HDPE Pipe Trench (ft)				24000	22000	2200			
			Main Pipeline Removal Unit Cost ($/ft of trench)				$0.89	$0.89	$0.89			
		Subtotal Pipeline Removal Costs					$21,360	$19,580	$1,958			
	B.	Pipeline Transportation and Disposal (NRC-Licensed Facility)										
			Pipe Diameter (inches)				3	4	3			
			Chipped Volume Reduction (ft^3/ft)				0.022	0.032	0.022			
			Subtotal Volume of Shredded PVC Pipe (ft^3)				528	704	48.4			
			Transportation and Disposal Unit Cost ($/$ft^3$)				$12.00	$12.00	$12.00			
		Subtotal Pipeline Disposal Costs					$6,336	$8,448	$581			
	C.	Discing/Seeding										
			Assumptions:									
				Width of Pipeline Trench (ft)			10	10	8			
				Area of Pipeline Trench (acres)			5.5	5.1	0.4			
			Discing/Seeding Unit Cost ($/acre)				$235	$235	$235			
		Subtotal Discing/Seeding Costs					$1,295	$1,187	$95			
	Subtotal Reclamation Costs per Pipeline						$28,991	$29,215	$2,634			
	Total Wastewater Pipeline Reclamation Costs						**$60,840**					
IV.	**Radium Settling Basin Reclamation**						**E. Radium Pon**	**W. Radium Pond**				
	A.	Soil Sampling and Monitoring										
			Number of Soil Samples				10	10				
			$/Sample				$176	$176		From Energy Evap Pond samples		
		Subtotal Soil Sampling and Monitoring Costs					$1,760	$1,760				
	C.	Grade and Contour										
				Volume of Embankment Material (CY)			6,400	6,400				
				Average Grade (%)			0	0				
				Distance (ft)			50	50				
				Material Moving Unit Cost per WDEQ Guideline No.12, App.E ($/cy)			$0.110	$0.110				
			Subtotal Grade and Contour Costs				$704	$704				
	C.	Topsoil Application										
			Assumptions:									
				Area of surface disturbance (ft^2)			37500	37500				
				Average thickness of topsoil (ft)			1	1				
				Average haul distance (ft)			2000	2000				
				Surface grade (%)			0%	0%				
			Volume of Topsoil (cy)				1,389	1,389				
			Topsoil Unit Cost per WDEQ Guideline No.12, App.C ($/cy)				$1.12	$1.12				
		Subtotal Topsoil Application Costs					$1,560	$1,560				
	D.	Discing/Seeding										
			Assumptions:									
				Area of surface disturbance (acres)			1	1				
			Discing/Seeding Unit Cost ($/acre)				$235	$235				
		Subtotal Discing/Seeding Costs					$235	$235				
	Subtotal Reclamation Costs per Radium Pond						$4,259	$4,259				
	Total Radium Settling Basin Reclamation Costs						**$8,518**					
V.	**Purge Storage Reservoir Reclamation**						**PSR-1**	**PSR-2**				
	A.	Soil Sampling and Analysis Costs					$3,000	$3,000				
	B.	Leachate Collection System Removal Costs					$5,000	$0				
	C.	Topsoil/Subsoil Application										
			Assumptions:									
				Average haul distance (ft)			1000	150				
				Surface grade (%)			0%	0%				
			Volume of Topsoil/Subsoil (cy)				83000	74000				
			Topsoil/Subsoil Unit Cost per WDEQ Guideline No.12, App.C ($/cy)				$0.87	$0.87				
			Topsoil/Subsoil Unit Cost per WDEQ Guideline No.12, App.E ($/cy)				$0.192	$0.192				
		Subtotal Topsoil/Subsoil Application Costs per Reservoir					$87,814	$78,292				
	D.	Discing/Seeding										
			Surface Area (acres)				6	32				
			Discing/Seeding Unit Cost ($/acre)				$235	$235				
		Subtotal Discing/Seeding Costs					$1,410	$7,520				
	Subtotal Reclamation Costs per Reservoir						$97,224	$88,812				
	Total Purge Storage Reservoir Reclamation Costs						**$186,036**					
VI.	**Irrigation Area Reclamation**						**Irrigator No. 1A**	**Irrigator No. 2**				
	A.	Irrigation Equipment Removal Costs					$2,000	$2,000				
	B.	Plowing										
			Assumptions:									
				Plowing Unit Cost ($/acre)			$55	$55				
			Irrigation Area (acres)				55	116				
			Number of Cultivations				2	2				

Miscellaneous Reclamation													
		Subtotal Plowing Costs						$6,050	$12,760				
	C.	Discing/Seeding											
			Discing/Seeding Unit Cost ($/acre)					$235	$235				
		Subtotal Discing/Seeding Costs						$12,925	$27,260				
	Subtotal Reclamation Costs per Irrigation Area							$20,975	$42,020				
	Total Irrigation Area Reclamation Costs							**$62,995**					
VII.	**Drilling Fluid Storage Cell Reclamation**												
		Assumptions:											
			Each cell is 100 ft (width) by 100 ft (length) by 10 ft (depth)										
			Volume of each cell, discounting side slopes (cy)					3704					
			Surface area disturbance associated with each cell (acres)					1					
			Average haul distance (ft)					500					
			Surface grade (%)					0					
	A.	Topsoil/Subsoil Application											
			Topsoil/Subsoil Unit Cost per WDEQ Guideline No.12, App.C ($/cy)					$0.73					
		Topsoil/Subsoil Application Costs per Storage Cell						$2,685					
	B.	Discing/Seeding											
			Discing/Seeding Unit Cost ($/acre)					$235					
		Subtotal Discing/Seeding Costs						$235					
	Subtotal Reclamation Costs per Storage Cell							$2,920					
	Total Number of Storage Cells							5					
	Total Drilling Fluid Storage Cell Reclamation Costs							**$14,600**					
VIII.	**Revegetation of Exxon Reclaimed Lands**												
		Assumptions:											
			Reseeding potential areas of erosion ($/acre)					$235					
		Surface Area (acres)						217					
	Total Exxon Reclaimed Lands Revegetation Costs							**$50,995**					
IX.	**Potential Mitigation Plan For Irrigator No.1A (Requested by WDEQ-LQD)**												
		Assumptions:											
			Harvesting grass for 2 years will further reduce Se levels in vegetation.										
			Harvest grass for 2 years @ $2000/year.					$4,000					
			Analyze Se in grass for 2 years @$165/sample X 4 samples X 2 yrs.					$1,320					
			Analyze Se in soil for 2 years @$174/sample X 28 samples X 2 yrs.					$9,744					
			Add 1 ft. of Se free water to 58 acre irrigation area @ cost of $6000.					$6,000					
			If desired, plow, disk and reseed area with alfalfa @ cost of $4400.					$4,400					
	Total Potential Mitigation Plan Costs- Call $30,000							**$30,000**					
X.	**Potential Mitigation Plan For Irrigator No.2 (Requested by WDEQ-LQD)**												
		Assumptions:											
			Harvesting grass for 2 years will further reduce Se levels in vegetation.										
			Harvest grass for 2 years @ $4000/year.					$8,000					
			Analyze Se in grass for 2 years @$165/sample X 4 samples X 2 yrs.					$1,320					
			Analyze Se in soil for 2 years @$174/sample X 32 samples X 2 yrs.					$11,136					
			Add 1 ft. of Se free water to 116 acre irrigation area @ cost of $12000.					$12,000					
			If desired, plow, disk and reseed area with alfalfa @ cost of $8800.					$8,800					
	Total Potential Mitigation Plan Costs- Call $42,000							**$42,000**					
XI.	**Potential Mitigation Plan for Shallow Well Casing Leak Investigation**												
		Assumptions:											
			Investigation and potential mitigation plan as of June 2002.										
			Assume cost of $250,000.										
	Total Preliminary Cost							**$250,000**					
TOTAL MISCELLANEOUS RECLAMATION COSTS								**$804,464**					

RADIUM TREATMENT			
Assumptions:			
1.	Based on actual 1998 operating costs from Satellite No. 2		
Radium Treatment Costs per 1000 Gallons			
	Chemical	= $	0.177
	Filtration	= $	0.021
	Electricity	= $	0.134
	By Product Disposal of Sludge	= $	0.097
TOTAL RADIUM TREATMENT COSTS PER 1000 GALLONS		**= $**	**0.43**

GROUNDWATER SWEEP (GWS)

Assumptions:

1. All pumps are 5 hp pumping at 5.0 gpm
2. Cost of electricity = $0.048/kwh
3. All water pumped is treated for radium removal at actual cost of $0.31/1000 gallons
4. All water pumped is disposed at irrigation facility with a 20 hp pump
5. Repair and maintenance costs estimated at $0.50/1000 gallons
6. Process sampling and analysis costs estimated at $0.03/1000 gallons
7. Labor costs are not included

Wellfield Pumping Costs per 1000 Gallons

$$\frac{1000\ \text{gal}}{} \times \frac{5\ \text{hp}}{5\ \text{gpm}} \times \frac{1\ \text{hr}}{60\ \text{min}} \times \frac{0.746\ \text{kwh}}{\text{hp}} \times \frac{\$\ 0.05}{\text{kwh}} = \$\ 0.60$$

Radium Treatment Costs per 1000 Gallons = $ 0.43

Pumping to Irrigator Costs per 1000 Gallons

$$\frac{1000\ \text{gal}}{} \times \frac{20\ \text{hp}}{400\ \text{gpm}} \times \frac{1\ \text{hr}}{60\ \text{min}} \times \frac{0.746\ \text{kwh}}{\text{hp}} \times \frac{\$\ 0.05}{\text{kwh}} = \$\ 0.03$$

Repair and Maintenance Costs per 1000 Gallons = $ 0.5

Process Sampling and Analysis Costs per 1000 Gallons = $ 0.03

TOTAL GWS COSTS PER 1000 GALLONS = $ 1.59

POWER RESOURCES INC HIGHLAND URANIUM PROJECT
SURETY ESTIMATE REVISION

REVERSE OSMOSIS (RO)			
Assumptions:			
1.	Based on actual 1998 operating costs at Satellite No. 1. Verified by Hydranautics RO System Design Software, Version 6.0 (1995)		
2.	Cost of electricity = $0.048/kwh		
3.	75% permeate/25% reject split		
4.	Membrane life of 5 years with a cost of $700 per membrane element		
5.	Includes cost of pumping from wellfield to RO Unit		
6.	Process sampling and analysis costs estimated at $0.03/1000 gallons		
7.	Labor costs are not included		
Reverse Osmosis Costs per 1000 Gallons			
	Electricity	= $	0.48
	Chemicals	= $	0.23
	Membrane Replacement	= $	0.03
	Repair and Maintenance	= $	0.26
	Process Sampling and Analysis	= $	0.03
TOTAL RO COSTS PER 1000 GALLONS		**= $**	**1.03**

CHEMICAL REDUCTANT																		
Assumptions:																		
1.	Bioremediation is utilized																	
2.	Based on actual 2003-2004 operating costs during restoration activities																	
3.	Added the cost of using cheese whey																	
TOTAL CHEMICAL REDUCTANT COSTS PER Kgal																**= $**	**0.3**	

DEEP WELL INJECTION

Assumptions:

1. Pump 150 hp pumping at 100 gpm
2. Cost of electricity = $0.048/kwh
3. Repair and maintenance costs based on average injection volume of 8,000,000 gallons per year
4. Repair and maintenance costs estimated at $.50/1000 gallons
5. Chemical costs based on average injection volume of 8,000,000 gallons per year
6. Labor costs are not included

Waste Disposal Pumping Costs per 1000 Gallons

$$\frac{1000 \text{ gal}}{} \times \frac{150 \text{ hp}}{100 \text{ gpm}} \times \frac{1 \text{ hr}}{60 \text{ min}} \times \frac{0.746 \text{ kwh}}{\text{hp}} \times \frac{\$ 0.048}{\text{kwh}} = \$ 0.90$$

Repair and Maintenance Costs per 1000 Gallons = $ 0.5

Chemical Costs per 1000 Gallons = $ 2.73

Scale Inhibitor	= $ 1.20
Corrosion Inhibitor	= $ 1.16
Oxygen Scavenger	= $ 0.37

TOTAL DEEP WELL INJECTION COSTS PER 1000 GALLONS = $ 4.13

WELL ABANDONMENT															
Assumptions:															
1	**Typical 8 hour working day**														
2	Backhoe for 8.0 hr/day to dig and reclaim pit at cost of $65/hr.														
3	Use hose reel for 8 hr/day to pull equipment from well at cost of $45/hr.														
4	Use cementer for 8.0 hr/day to pump cement/plug gel at cost of $45/hr.														
5	Use tow vehicle for 8.0 hr/day to tow hose reel and cementer from well to well at cost of $40/hr.														
6	Labor for backhoe, hose reel, cementer will require 3 workers at 8.0 hr/day at cost of $35/hr.														
	Materials include 7.5 sacks of cement/100 ft and 1 sack of plug gel/100 ft of 5" well casing.														
	Cost of cement is $7.62and plug gel cost is $5.95/sack.														
	Fixed Costs														
	Backhoe														
		8	hours	X	$	65	per hour		=$	520.00					
	Hose Reel/Tow Vehicle														
		8	hours	X	$	35	per hour		=$	280.00					
	Cementer														
		8	hours	X	$	45	per hour		=$	360.00					
	Tow Vehicle														
		8	hours	X	$	40	per hour		=$	320.00					
	Labor														
3	men=	24	man	X	$	15.00	per man		=$	360.00					
			hours				hour								
			Total Fixed Costs per 8.0 hr/day						=$	1840.00					
	Variable Costs				(per 100 ft of well depth)										
	Materials														
		7.5	sack cement	X	$	7.62	per		=$	57.15					
			per 100 feet				sack								
		1	sack plug gel	X	$	5.95	per ho		=$	5.95					
			per 100 feet				plug								
WELL ABANDONMENT Page 2															
	Total materials Cost (per 100 ft of well depth)								$	63.10					
	Total number of wells completed per/day														
		6													
	Cost per Well per Unit of Average Depth														
					Well Depth (ft)										
						450			**=$**	**354**					
						500			**=$**	**359**					
						550			**=$**	**365**					
						600			**=$**	**370**					
						650			**=$**	**375**					
						700			**=$**	**380**					
						750			**=$**	**386**					
						800			**=$**	**391**					
						850			**=$**	**396**					
						900			**=$**	**401**					
						950			**=$**	**407**					

FIVE YEAR MECHANICAL INTEGRITY TESTS (MIT)														
Assumptions:														
1	Pulling Unit for 8.0 hr/day at cost of $45/hr.													
2	MIT Unit for 8.0 hr/day at cost of $45/hr.													
3	Labor for operation of pulling unit will require 2 workers at $15/hr													
4	Labor for operation of MIT Unit will require 1 worker at $15/hr													
5	Average wells plugged per day is 6													
MIT Costs per Well														
Equipment:														
	Pulling Unit													
		8	hours	X	$	45	per hour					=$	360.00	
	MIT Unit													
		8	hours	X	$	45	per hour					=$	360.00	
Labor:														
	Pulling Unit													
		8	hours	X	$	15	per hour	X	2	workers		=$	$240.00	
	MIT Unit													
		8	hours	X	$	15	per hour					=$	120.00	
							TOTAL MIT COST PER DAY					**=$**	**1080.00**	
	Wells Completed					6	per day							
							MIT COSTS PER WELL					**=$**	**180.00**	

MAIN PIPELINE REMOVAL															
Assumptions:															
1.	Trenching with trackhoe at 750 ft/day														
2.	Pipeline extraction and backfilling with trackhoe at 750 ft/day														
3.	Trackhoe rental: $1,125/week														
4.	Fuel cost: $10/operating hour SH														
5.	Trackhoe operation requires 1 worker at $15/hour														
6.	Pipeline extraction requires 2 workers at $15/hour (in addition to trackhoe operator)														
7.	Pipelines removed simutaneously														
8.	Includes removal of manholes														
9.	Operating schedule: 8 hrs/day, 5 days/week														
Main Pipeline Removal Costs per ft of Trench															
Equipment															
	Trackhoe														
		$	1125	X	1	week	X	1	days	=$	0.30				
		week			5	days		750	ft						
	Fuel														
		$	10	X	8	hrs	X	1	days	=$	0.11				
		hour			1	day		750	ft						
Labor															
	Trackhoe Operation														
		$	15	X	8	man hrs	X	1	days	=$	0.16				
		man hr			1	day		750	ft						
	Pipeline Extraction														
		$	15	X	16	man hrs	X	1	day	=$	0.32				
		man hr			1	day		750	ft						
MAIN PIPELINE REMOVAL COST PER FT OF TRENCH										**=$**	**0.89**				

WELLFIELD PIPING REMOVAL															
Assumptions:															
1.	Trenching with backhoe at 1500 ft/day														
2.	Pipeline extraction and backfilling with backhoe at 1500/day														
3.	Backhoe rental: $1,000/week														
4.	Fuel cost: $10/operating hour														
5.	Backhoe operation requires 1 worker at $15/hour														
6.	Pipeline extraction requires 2 workers at $15/hour (in addition to trackhoe operator)														
7.	Operating schedule: 8 hrs/day, 5 days/week														
Main Pipeline Removal Costs per ft of Pipe															
Equipment															
	Backhoe														
		$	1000	X	1	week	X	1	days	=$	0.13				
			week		5	days		1500	ft						
	Fuel														
		$	10	X	8	hrs	X	1	days	=$	0.05				
			hour		1	day		1500	ft						
Labor															
	Backhoe Operation														
		$	15	X	8	man hrs	X	1	days	=$	0.08				
			man hr		1	day		1500	ft						
	Pipeline Extraction														
		$	15	X	16	man hrs	X	1	day	=$	0.16				
			man hr		1	day		1500	ft						
	MAIN PIPELINE REMOVAL COST PER FT OF PIPE									**=$**	**0.420**				

WELLFIELD ROAD RECLAMATION

Assumptions (Roads constructed before January 1, 1997):

1. Gravel road base removed at cost of $0.86/cy/1000 ft (WDEQ Guideline No. 12, App. C, Level Ground, 500 ft haul)
2. Gravel road base: average depth = 0.25 ft, average width = 10 ft
3. Roads scarified prior to topsoil application at cost of $41.87/acre (WDEQ Guideline No. 12, Appendix P)
4. Grading of scarified roads prior to topsoil application at cost of $45.65/acre (WDEQ Guideline No. 12, Appendix G)
5. Topsoil applied at cost of $0.866/cy/1000 ft (WDEQ Guideline No. 12, App. C, Level Ground, 500 ft haul)
6. Stripped topsoil: average depth = 0.67 ft, average width = 25 ft
7. Discing/seeding cost of $235/acre is based on actual contractor costs

Gravel Road Base Removal Costs per 1000 ft of Road

$$\frac{1000\ \text{ft}}{} \times \frac{0.25\ \text{ft}}{} \times \frac{10\ \text{ft}}{} \times \frac{1\ \text{cy}}{27\ \text{ft}^3} \times \frac{\$0.87}{\text{cy}} = \$\ 80$$

Scarification Costs per 1000 ft of Road

$$\frac{1000\ \text{ft}}{} \times \frac{25\ \text{ft}}{} \times \frac{1\ \text{acre}}{4.356\text{E+}04\ \text{ft}^2} \times \frac{\$41.87}{\text{acre}} = \$\ 24$$

Grading Costs per 1000 ft of Road

$$\frac{1000\ \text{ft}}{} \times \frac{25\ \text{ft}}{} \times \frac{1\ \text{acre}}{4.356\text{E+}04\ \text{ft}^2} \times \frac{\$45.65}{\text{acre}} = \$\ 26$$

Topsoil Application Costs per 1000 ft of Road

$$\frac{1000\ \text{ft}}{} \times \frac{0.67\ \text{ft}}{} \times \frac{25\ \text{ft}}{} \times \frac{1\ \text{cy}}{27\ \text{ft}^3} \times \frac{\$0.87}{\text{cy}} = \$\ 537$$

Discing/Seeding Costs per 1000 ft of Road

$$\frac{1000\ \text{ft}}{} \times \frac{25\ \text{ft}}{} \times \frac{1\ \text{acre}}{4.356\text{E+}04\ \text{ft}^2} \times \frac{\$235}{\text{acre}} = \$\ 135$$

TOTAL WELLFIELD ROAD RECLAMATION COSTS PER 1000 FT OF ROAD (BEFORE JANUARY 1, 1997) = $ 802

Assumptions (Roads constructed after January 1, 1997):

1. Gravel road base will not be removed
2. Roads scarified prior to topsoil application at cost of $41.87/acre (WDEQ Guideline No. 12, Appendix P)
3. Grading of scarified roads prior to topsoil application at cost of $45.65/acre (WDEQ Guideline No. 12, Appendix G)
4. Topsoil applied at cost of $0.86/cy/1000 ft (WDEQ Guideline No. 12, App. C, Level Ground, 500 ft haul)
5. Stripped topsoil: average depth = 0.4 ft, average width = 20 ft
6. Discing/seeding cost of $235/acre is based on actual contractor costs

Scarification Costs per 1000 ft of Road

$$\frac{1000\ \text{ft}}{} \times \frac{20\ \text{ft}}{} \times \frac{1\ \text{acre}}{4.356\text{E+}04\ \text{ft}^2} \times \frac{\$41.87}{\text{acre}} = \$\ 19$$

Grading Costs per 1000 ft of Road

$$\frac{1000\ \text{ft}}{} \times \frac{20\ \text{ft}}{} \times \frac{1\ \text{acre}}{4.356\text{E+}04\ \text{ft}^2} \times \frac{\$45.65}{\text{acre}} = \$\ 21$$

Topsoil Application Costs per 1000 ft of Road

$$\frac{1000\ \text{ft}}{} \times \frac{0.40\ \text{ft}}{} \times \frac{20\ \text{ft}}{} \times \frac{1\ \text{cy}}{27\ \text{ft}^3} \times \frac{\$0.86}{\text{cy}} = \$\ 255$$

Discing/Seeding Costs per 1000 ft of Road

$$\frac{1000\ \text{ft}}{} \times \frac{20\ \text{ft}}{} \times \frac{1\ \text{acre}}{4.356\text{E+}04\ \text{ft}^2} \times \frac{\$235}{\text{acre}} = \$\ 108$$

TOTAL WELLFIELD ROAD RECLAMATION COSTS PER 1000 FT OF ROAD (AFTER JANUARY 1, 1997) = $ 403

BYPRODUCT MATERIAL TRANSPORTATION AND DISPOSAL											
Assumptions:											
1.	Based on actual 2001-2002 contracted costs for transportation to and disposal at an										
	NRC-licensed disposal facility.										
2.	Includes profit for transporter and disposal facility.										
3.	All types of waste shipped vi bulk container (30-yd^3 dumpster or 30-yd^3 dump truck).										
4.	Each shipment contains 30,000 lbs of material.										
		Transportation Cost				**Disposal Cost**			**Total**		
			$ 1.00	/ft^3	+	$ 11.00	/ft^3	=	$ 12.00	/ft^3	
								=	**$ 12.00**	**/ft^3**	

DISKING/SEEDING									
Assumptions:									
1.	Based on actual contractor costs								
2.	Discking cost $55/Acre								
3.	Seeding cost based on drill seeding - seed cost based on type,								
	availability, over all cost of $180.00/Acre								
TOTAL DISKING/SEEDING COSTS PER ACRE					**= $**	**235**			

Abbreviations/Acronyms						
$	Dollars					
$/Kgal	Dollars per 1000 gallons					
avg	average					
ft	feet					
ft2	square feet					
ft3	cubic feet					
gal	gallon					
gpm	gallons per minute					
H&S	Health and Safety					
H2S	Hydrogen Sulfide					
H2SO4	Sulfuric Acid					
HCl	Hydrochloric Acid					
Hp	Horsepower					
Kgal	1000 gallons					
Kwh	Kilowatt-hours					
NaOH	Caustic Soda					
OD	Outside Diameter					
PPE	personal protective equipment					
PV	Pore Volume Estimate					
reqm't	requirement					
RO	Reverse Osmosis					
WDW	Waste Disposal Well					
yd3	cubic yards					
yr	year					