

PRESENT WORTH ANALYSIS

PROJECT: Maine Yankee
 SITE: Wiscasset, Maine RCRA Site
 ALTERNATIVE: Soil 1
 DESCRIPTION: Institutional Controls
 PREPARED BY: J. Armstrong
 REVISED BY: J. Rendall
 PROJECT NUMBER: 263674.01.04
 Base Year 2004

Date: Mar-05

Assumptions

Discount Rate 4.50% The discount rate takes into account inflation, depreciation, etc.
 Assumes Total PV earns interest for an entire year (12 months), compounded annually.

Present Worth Analysis

		E	A	B	C=A+B	C*A	C*B	C'E	
		Total PV							
Elapsed Time	Year	Discount Factor at 4.5%	Capital Cost	O&M Cost	Total Cost	Capital Costs at 4.5%	Total PV O&M Costs at 4.5%	Total PV Costs at 4.5%	Balance of Interest Bearing Account at 4.5%
0	2004	1.000	\$ 65,000	0	\$ 65,000	\$ 65,000	\$ -	\$ 65,000	\$ 25,533
1	2005	0.957		\$ 1,500		\$ -	\$ 1,435	\$ 1,435	\$ 26,682
2	2006	0.916		\$ 1,500		\$ -	\$ 1,374	\$ 1,374	\$ 27,882
3	2007	0.876		\$ 1,500		\$ -	\$ 1,314	\$ 1,314	\$ 29,137
4	2008	0.839		\$ 1,500		\$ -	\$ 1,258	\$ 1,258	\$ 30,448
5	2009	0.802		\$ 1,500		\$ -	\$ 1,204	\$ 1,204	\$ 31,819
6	2010	0.768		\$ 1,500		\$ -	\$ 1,152	\$ 1,152	\$ 33,250
7	2011	0.735		\$ 1,500		\$ -	\$ 1,102	\$ 1,102	\$ 34,747
8	2012	0.703		\$ 1,500		\$ -	\$ 1,055	\$ 1,055	\$ 36,310
9	2013	0.673		\$ 1,500		\$ -	\$ 1,009	\$ 1,009	\$ 37,944
10	2014	0.644		\$ 1,500		\$ -	\$ 966	\$ 966	\$ 39,652
11	2015	0.616		\$ 1,500		\$ -	\$ 924	\$ 924	\$ 41,436
12	2016	0.590		\$ 1,500		\$ -	\$ 884	\$ 884	\$ 43,301
13	2017	0.564		\$ 1,500		\$ -	\$ 846	\$ 846	\$ 45,249
14	2018	0.540		\$ 1,500		\$ -	\$ 810	\$ 810	\$ 47,285
15	2019	0.517		\$ 1,500		\$ -	\$ 775	\$ 775	\$ 49,413
16	2020	0.494		\$ 1,500		\$ -	\$ 742	\$ 742	\$ 51,637
17	2021	0.473		\$ 1,500		\$ -	\$ 710	\$ 710	\$ 53,960
18	2022	0.453		\$ 1,500		\$ -	\$ 679	\$ 679	\$ 56,389
19	2023	0.433		\$ 1,500		\$ -	\$ 650	\$ 650	\$ 58,926
20	2024	0.415		\$ 1,500		\$ -	\$ 622	\$ 622	\$ 61,578
21	2025	0.397		\$ 1,500		\$ -	\$ 595	\$ 595	\$ 64,349
22	2026	0.380		\$ 1,500		\$ -	\$ 570	\$ 570	\$ 67,245
23	2027	0.363		\$ 1,500		\$ -	\$ 545	\$ 545	\$ 70,271
24	2028	0.348		\$ 1,500		\$ -	\$ 522	\$ 522	\$ 73,433
25	2029	0.333		\$ 1,500		\$ -	\$ 499	\$ 499	\$ 76,737
26	2030	0.318		\$ 1,500		\$ -	\$ 478	\$ 478	\$ 80,190
27	2031	0.305		\$ 1,500		\$ -	\$ 457	\$ 457	\$ 83,799
28	2032	0.292		\$ 1,500		\$ -	\$ 437	\$ 437	\$ 87,570
29	2033	0.279		\$ 1,500		\$ -	\$ 419	\$ 419	\$ 91,511
30	2034	0.267		\$ 1,500		\$ -	\$ 401	\$ 401	\$ 95,629
Total Alternative Soil 1			\$ 65,000	\$ 45,000	\$ 65,000	\$ 65,000	\$ 24,433	\$ 89,433	

PRESENT WORTH ANALYSIS

PROJECT: Maine Yankee
 SITE: Wiscasset, Maine RCRA Site
 ALTERNATIVE: Soil 2
 DESCRIPTION: Excavate, ORC, offsite disposal and Intitutional Controls
 PREPARED BY: Jennifer Armstrong
 Revised By: J. Rendall
 PROJECT NUMBER: 263674.01.04
 Base Year 2004

Date: Mar-05
 Date: Dec-04

Assumptions

Discount Rate **4.50%** The discount rate takes into account inflation, depreciation, etc.
 Assumes Total PV earns interest for an entire year (12 months), compounded annually.

Present Worth Analysis

		E	A	B	C=A+B	C*A	C*B	C^E			
		Discount Factor at		Total PV		Total PV O&M		Total PV Costs at		Balance of Interest	
Elapsed Time	Year	4.5%	Capital Cost	O&M Cost	Total Cost	Capital Costs at 4.5%	Costs at 4.5%	4.5%	Bearing Account at 4.5%		
0	2004	1.000	\$ 28,656,563	0	\$ 28,656,563	\$ 28,656,563	\$ -	\$ 28,656,563	\$	28,656,563	\$ 25,533
1	2005	0.957		\$ 1,500	\$ 1,500	\$ -	\$ 1,435	\$ 1,435	\$	1,435	\$ 25,114
2	2006	0.916		\$ 1,500	\$ 1,500	\$ -	\$ 1,374	\$ 1,374	\$	1,374	\$ 24,677
3	2007	0.876		\$ 1,500	\$ 1,500	\$ -	\$ 1,314	\$ 1,314	\$	1,314	\$ 24,220
4	2008	0.839		\$ 1,500	\$ 1,500	\$ -	\$ 1,258	\$ 1,258	\$	1,258	\$ 23,742
5	2009	0.802		\$ 1,500	\$ 1,500	\$ -	\$ 1,204	\$ 1,204	\$	1,204	\$ 23,243
6	2010	0.768		\$ 1,500	\$ 1,500	\$ -	\$ 1,152	\$ 1,152	\$	1,152	\$ 22,722
7	2011	0.735		\$ 1,500	\$ 1,500	\$ -	\$ 1,102	\$ 1,102	\$	1,102	\$ 22,177
8	2012	0.703		\$ 1,500	\$ 1,500	\$ -	\$ 1,055	\$ 1,055	\$	1,055	\$ 21,607
9	2013	0.673		\$ 1,500	\$ 1,500	\$ -	\$ 1,009	\$ 1,009	\$	1,009	\$ 21,012
10	2014	0.644		\$ 1,500	\$ 1,500	\$ -	\$ 966	\$ 966	\$	966	\$ 20,390
11	2015	0.616		\$ 1,500	\$ 1,500	\$ -	\$ 924	\$ 924	\$	924	\$ 19,740
12	2016	0.590		\$ 1,500	\$ 1,500	\$ -	\$ 884	\$ 884	\$	884	\$ 19,061
13	2017	0.564		\$ 1,500	\$ 1,500	\$ -	\$ 846	\$ 846	\$	846	\$ 18,351
14	2018	0.540		\$ 1,500	\$ 1,500	\$ -	\$ 810	\$ 810	\$	810	\$ 17,609
15	2019	0.517		\$ 1,500	\$ 1,500	\$ -	\$ 775	\$ 775	\$	775	\$ 16,834
16	2020	0.494		\$ 1,500	\$ 1,500	\$ -	\$ 742	\$ 742	\$	742	\$ 16,024
17	2021	0.473		\$ 1,500	\$ 1,500	\$ -	\$ 710	\$ 710	\$	710	\$ 15,178
18	2022	0.453		\$ 1,500	\$ 1,500	\$ -	\$ 679	\$ 679	\$	679	\$ 14,293
19	2023	0.433		\$ 1,500	\$ 1,500	\$ -	\$ 650	\$ 650	\$	650	\$ 13,369
20	2024	0.415		\$ 1,500	\$ 1,500	\$ -	\$ 622	\$ 622	\$	622	\$ 12,403
21	2025	0.397		\$ 1,500	\$ 1,500	\$ -	\$ 595	\$ 595	\$	595	\$ 11,394
22	2026	0.380		\$ 1,500	\$ 1,500	\$ -	\$ 570	\$ 570	\$	570	\$ 10,339
23	2027	0.363		\$ 1,500	\$ 1,500	\$ -	\$ 545	\$ 545	\$	545	\$ 9,237
24	2028	0.348		\$ 1,500	\$ 1,500	\$ -	\$ 522	\$ 522	\$	522	\$ 8,085
25	2029	0.333		\$ 1,500	\$ 1,500	\$ -	\$ 499	\$ 499	\$	499	\$ 6,881
26	2030	0.318		\$ 1,500	\$ 1,500	\$ -	\$ 478	\$ 478	\$	478	\$ 5,623
27	2031	0.305		\$ 1,500	\$ 1,500	\$ -	\$ 457	\$ 457	\$	457	\$ 4,309
28	2032	0.292		\$ 1,500	\$ 1,500	\$ -	\$ 437	\$ 437	\$	437	\$ 2,935
29	2033	0.279		\$ 1,500	\$ 1,500	\$ -	\$ 419	\$ 419	\$	419	\$ 1,500
30	2034	0.267		\$ 1,500	\$ 1,500	\$ -	\$ 401	\$ 401	\$	401	\$ 0
Total Alternative Soil 2			\$ 28,656,563	\$ 45,000	\$ 28,701,563	\$ 28,656,563	\$ 24,433	\$ 28,680,996			

PRESENT WORTH ANALYSIS

PROJECT: Maine Yankee
 SITE: Wiscasset, Maine RCRA Site
 ALTERNATIVE: Groundwater 1
 DESCRIPTION: Institutional Controls
 PREPARED BY: J. Armstrong
 REVISED BY: J. Rendall
 PROJECT NUMBER: 263674.01.04
 Base Year 2004

Date: Mar-04

Assumptions

Discount Rate **4.50%** The discount rate takes into account inflation, depreciation, etc.
 Assumes Total PV earns interest for an entire year (12 months), compounded annually.

Present Worth Analysis

		E	A	B	C=A+B	C*A	C*B	C'E		
Elapsed Time	Year	Discount Factor at 4.5%	Total PV		Total Cost	Capital Costs at 4.5%	Total PV O&M Costs at 4.5%	Total PV Costs at 4.5%	Balance of Interest Bearing Account at 4.5%	
			Capital Cost	O&M Cost						
0	2004	1.000	\$ 65,000	0	\$ 65,000	\$ 65,000	\$ -	\$ 65,000	\$ -	\$ 25,533
1	2005	0.957		\$ 1,500	\$ 1,500	\$ -	\$ 1,435	\$ 1,435	\$ -	\$ 25,114
2	2006	0.916		\$ 1,500	\$ 1,500	\$ -	\$ 1,374	\$ 1,374	\$ -	\$ 24,677
3	2007	0.876		\$ 1,500	\$ 1,500	\$ -	\$ 1,314	\$ 1,314	\$ -	\$ 24,220
4	2008	0.839		\$ 1,500	\$ 1,500	\$ -	\$ 1,258	\$ 1,258	\$ -	\$ 23,742
5	2009	0.802		\$ 1,500	\$ 1,500	\$ -	\$ 1,204	\$ 1,204	\$ -	\$ 23,243
6	2010	0.768		\$ 1,500	\$ 1,500	\$ -	\$ 1,152	\$ 1,152	\$ -	\$ 22,722
7	2011	0.735		\$ 1,500	\$ 1,500	\$ -	\$ 1,102	\$ 1,102	\$ -	\$ 22,177
8	2012	0.703		\$ 1,500	\$ 1,500	\$ -	\$ 1,055	\$ 1,055	\$ -	\$ 21,607
9	2013	0.673		\$ 1,500	\$ 1,500	\$ -	\$ 1,009	\$ 1,009	\$ -	\$ 21,012
10	2014	0.644		\$ 1,500	\$ 1,500	\$ -	\$ 966	\$ 966	\$ -	\$ 20,390
11	2015	0.616		\$ 1,500	\$ 1,500	\$ -	\$ 924	\$ 924	\$ -	\$ 19,740
12	2016	0.590		\$ 1,500	\$ 1,500	\$ -	\$ 884	\$ 884	\$ -	\$ 19,061
13	2017	0.564		\$ 1,500	\$ 1,500	\$ -	\$ 846	\$ 846	\$ -	\$ 18,351
14	2018	0.540		\$ 1,500	\$ 1,500	\$ -	\$ 810	\$ 810	\$ -	\$ 17,609
15	2019	0.517		\$ 1,500	\$ 1,500	\$ -	\$ 775	\$ 775	\$ -	\$ 16,834
16	2020	0.494		\$ 1,500	\$ 1,500	\$ -	\$ 742	\$ 742	\$ -	\$ 16,024
17	2021	0.473		\$ 1,500	\$ 1,500	\$ -	\$ 710	\$ 710	\$ -	\$ 15,178
18	2022	0.453		\$ 1,500	\$ 1,500	\$ -	\$ 679	\$ 679	\$ -	\$ 14,293
19	2023	0.433		\$ 1,500	\$ 1,500	\$ -	\$ 650	\$ 650	\$ -	\$ 13,369
20	2024	0.415		\$ 1,500	\$ 1,500	\$ -	\$ 622	\$ 622	\$ -	\$ 12,403
21	2025	0.397		\$ 1,500	\$ 1,500	\$ -	\$ 595	\$ 595	\$ -	\$ 11,394
22	2026	0.380		\$ 1,500	\$ 1,500	\$ -	\$ 570	\$ 570	\$ -	\$ 10,339
23	2027	0.363		\$ 1,500	\$ 1,500	\$ -	\$ 545	\$ 545	\$ -	\$ 9,237
24	2028	0.348		\$ 1,500	\$ 1,500	\$ -	\$ 522	\$ 522	\$ -	\$ 8,085
25	2029	0.333		\$ 1,500	\$ 1,500	\$ -	\$ 499	\$ 499	\$ -	\$ 6,881
26	2030	0.318		\$ 1,500	\$ 1,500	\$ -	\$ 478	\$ 478	\$ -	\$ 5,623
27	2031	0.305		\$ 1,500	\$ 1,500	\$ -	\$ 457	\$ 457	\$ -	\$ 4,309
28	2032	0.292		\$ 1,500	\$ 1,500	\$ -	\$ 437	\$ 437	\$ -	\$ 2,935
29	2033	0.279		\$ 1,500	\$ 1,500	\$ -	\$ 419	\$ 419	\$ -	\$ 1,500
30	2034	0.267		\$ 1,500	\$ 1,500	\$ -	\$ 401	\$ 401	\$ -	\$ (0)
Total Alternative Groundwater 1			\$ 65,000	\$ 45,000	\$ 110,000	\$ 65,000	\$ 24,433	\$ 89,433		

PRESENT WORTH ANALYSIS

PROJECT: Maine Yankee
 SITE: Wiscasset, Maine RCRA Site
 ALTERNATIVE: Groundwater 2
 DESCRIPTION: Ground water Monitoring
 PREPARED BY: J. Armstrong
 REVISED BY: J. Rendall
 PROJECT NUMBER: 263674.01.04
 Base Year 2004

Date: Mar-04
 Date: Dec-04

Assumptions

Discount Rate 4.50%

Assumes Total PV earns interest for an entire year (12 months), compounded annually.

Present Worth Analysis

		E	A	B	C=A+B	C*A	C*B	C^E		
		Total PV								
Elapsed Time	Year	Discount Factor at 4.5%	Capital Cost	O&M Cost	Total Cost	Capital Costs at 4.5%	Total PV O&M Costs at 4.5%	Total PV Costs at 4.5%	Balance of Interest Bearing Account at 4.5%	
0	2004	1.000	\$ 217,503		\$ 217,503	\$ 217,503	\$ -	\$ 217,503	\$	893,759
1	2005	0.957		\$ 145,462	\$ 145,462	\$ -	\$ 139,198	\$ 139,198	\$	781,971
2	2006	0.916		\$ 145,462	\$ 145,462	\$ -	\$ 133,204	\$ 133,204	\$	665,152
3	2007	0.876		\$ 145,462	\$ 145,462	\$ -	\$ 127,468	\$ 127,468	\$	543,076
4	2008	0.839		\$ 1,500	\$ 1,500	\$ -	\$ 1,258	\$ 1,258	\$	565,947
5	2009	0.802		\$ 1,500	\$ 1,500	\$ -	\$ 1,204	\$ 1,204	\$	589,847
6	2010	0.768		\$ 1,500	\$ 1,500	\$ -	\$ 1,152	\$ 1,152	\$	614,822
7	2011	0.735		\$ 1,500	\$ 1,500	\$ -	\$ 1,102	\$ 1,102	\$	640,922
8	2012	0.703		\$ 147,547	\$ 147,547	\$ -	\$ 103,753	\$ 103,753	\$	515,577
9	2013	0.673		\$ 1,500	\$ 1,500	\$ -	\$ 1,009	\$ 1,009	\$	537,211
10	2014	0.644		\$ 1,500	\$ 1,500	\$ -	\$ 966	\$ 966	\$	559,818
11	2015	0.616		\$ 1,500	\$ 1,500	\$ -	\$ 924	\$ 924	\$	583,442
12	2016	0.590		\$ 1,500	\$ 1,500	\$ -	\$ 884	\$ 884	\$	608,129
13	2017	0.564		\$ 147,547	\$ 147,547	\$ -	\$ 83,256	\$ 83,256	\$	481,309
14	2018	0.540		\$ 1,500	\$ 1,500	\$ -	\$ 810	\$ 810	\$	501,400
15	2019	0.517		\$ 1,500	\$ 1,500	\$ -	\$ 775	\$ 775	\$	522,396
16	2020	0.494		\$ 1,500	\$ 1,500	\$ -	\$ 742	\$ 742	\$	544,336
17	2021	0.473		\$ 1,500	\$ 1,500	\$ -	\$ 710	\$ 710	\$	567,264
18	2022	0.453		\$ 147,547	\$ 147,547	\$ -	\$ 66,809	\$ 66,809	\$	438,605
19	2023	0.433		\$ 1,500	\$ 1,500	\$ -	\$ 650	\$ 650	\$	456,774
20	2024	0.415		\$ 1,500	\$ 1,500	\$ -	\$ 622	\$ 622	\$	475,762
21	2025	0.397		\$ 1,500	\$ 1,500	\$ -	\$ 595	\$ 595	\$	495,603
22	2026	0.380		\$ 1,500	\$ 1,500	\$ -	\$ 570	\$ 570	\$	516,338
23	2027	0.363		\$ 147,547	\$ 147,547	\$ -	\$ 53,611	\$ 53,611	\$	385,387
24	2028	0.348		\$ 1,500	\$ 1,500	\$ -	\$ 522	\$ 522	\$	401,162
25	2029	0.333		\$ 1,500	\$ 1,500	\$ -	\$ 499	\$ 499	\$	417,647
26	2030	0.318		\$ 1,500	\$ 1,500	\$ -	\$ 478	\$ 478	\$	434,874
27	2031	0.305		\$ 1,500	\$ 1,500	\$ -	\$ 457	\$ 457	\$	452,875
28	2032	0.292		\$ 147,547	\$ 147,547	\$ -	\$ 43,020	\$ 43,020	\$	319,069
29	2033	0.279		\$ 147,547	\$ 147,547	\$ -	\$ 41,168	\$ 41,168	\$	179,241
30	2034	0.267	\$ 31,694	\$ 147,547	\$ 179,241	\$ 8,462	\$ 39,395	\$ 47,857	\$	0
Total Alternative Groundwater 2			\$ 249,197	\$ 1,499,212	\$ 1,748,409	\$ 225,965	\$ 846,810	\$ 1,072,775		

PRESENT WORTH ANALYSIS

PROJECT: Maine Yankee
 SITE: Wiscasset, Maine RCRA Site
 ALTERNATIVE: Groundwater 3
 DESCRIPTION: Ground water Monitoring
 PREPARED BY: K. Cole
 REVISED BY: J. Rendall
 PROJECT NUMBER: 263674.01.04
 Base Year 2004

Date: Dec-04

Assumptions

Discount Rate 4.50%

Assumes Total PV earns interest for an entire year (12 months), compounded annually.

Present Worth Analysis

		E	A	B	C=A+B	C*A	C*B	C*E		
		Total PV								
Elapsed Time	Year	Discount Factor at 4.5%	Capital Cost	O&M Cost	Total Cost	Capital Costs at 4.5%	Total PV O&M Costs at 4.5%	Total PV Costs at 4.5%	Balance of Interest Bearing Account at 4.5%	
0	2004	1.000	11,093,498		\$ 11,093,498	\$ 11,093,498	\$ -	\$ -	\$ 11,093,498	\$ 51,857,646
1	2005	0.957		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 2,913,200	\$ 2,913,200	\$	\$ 51,009,953
2	2006	0.916		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 2,787,751	\$ 2,787,751	\$	\$ 50,124,113
3	2007	0.876		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 2,667,705	\$ 2,667,705	\$	\$ 49,198,411
4	2008	0.839		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 2,552,827	\$ 2,552,827	\$	\$ 48,231,052
5	2009	0.802		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 2,442,897	\$ 2,442,897	\$	\$ 47,220,162
6	2010	0.768		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 2,337,701	\$ 2,337,701	\$	\$ 46,163,781
7	2011	0.735		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 2,237,034	\$ 2,237,034	\$	\$ 45,059,864
8	2012	0.703		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 2,140,702	\$ 2,140,702	\$	\$ 43,906,271
9	2013	0.673		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 2,048,519	\$ 2,048,519	\$	\$ 42,700,765
10	2014	0.644		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 1,960,305	\$ 1,960,305	\$	\$ 41,441,012
11	2015	0.616		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 1,875,890	\$ 1,875,890	\$	\$ 40,124,570
12	2016	0.590		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 1,795,110	\$ 1,795,110	\$	\$ 38,748,889
13	2017	0.564		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 1,717,809	\$ 1,717,809	\$	\$ 37,311,301
14	2018	0.540		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 1,643,836	\$ 1,643,836	\$	\$ 35,809,022
15	2019	0.517		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 1,573,049	\$ 1,573,049	\$	\$ 34,239,141
16	2020	0.494		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 1,505,310	\$ 1,505,310	\$	\$ 32,598,615
17	2021	0.473		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 1,440,488	\$ 1,440,488	\$	\$ 30,884,265
18	2022	0.453		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 1,378,458	\$ 1,378,458	\$	\$ 29,092,769
19	2023	0.433		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 1,319,098	\$ 1,319,098	\$	\$ 27,220,657
20	2024	0.415		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 1,262,295	\$ 1,262,295	\$	\$ 25,264,299
21	2025	0.397		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 1,207,938	\$ 1,207,938	\$	\$ 23,219,905
22	2026	0.380		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 1,155,921	\$ 1,155,921	\$	\$ 21,083,513
23	2027	0.363		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 1,106,145	\$ 1,106,145	\$	\$ 18,850,984
24	2028	0.348		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 1,058,512	\$ 1,058,512	\$	\$ 16,517,990
25	2029	0.333		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 1,012,930	\$ 1,012,930	\$	\$ 14,080,013
26	2030	0.318		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 969,311	\$ 969,311	\$	\$ 11,532,326
27	2031	0.305		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 927,570	\$ 927,570	\$	\$ 8,869,993
28	2032	0.292		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 887,627	\$ 887,627	\$	\$ 6,087,855
29	2033	0.279		\$ 3,044,294	\$ 3,044,294	\$ -	\$ 849,404	\$ 849,404	\$	\$ 3,180,521
30	2034	0.267	\$ 136,227	\$ 3,044,294	\$ 3,180,521	\$ 36,373	\$ 812,827	\$ 849,199	\$	\$ 0
Total Alternative Groundwater 3			\$ 11,229,725	\$ 91,328,826	\$ 102,558,551	\$ 11,129,871	\$ 49,588,169	\$ 60,718,040		

**Detailed Costing
Groundwater Treatment System
Maine Yankee Facility, Wiscasset, Maine**

Detailed Cost Breakdown

Item	Description	Unit	No.	Rate	Total Raw Cost	Apply G&A of 11.5%	Apply Profit of 10%	Contingency 10%	TOTAL for Item
Install Distribution Pipe - 3" carbon steel									
	Surveying Services	LS	1	\$ 2,000.00	\$ 2,000	\$ 2,230	\$ 2,453	\$ 2,698	
	General Safety Equipment & PPE controls	LS	1	\$ 3,000.00	\$ 3,000	\$ 3,345	\$ 3,680	\$ 4,047	
	Backhoe to Lay pipe - Mob/Demob	LS	1	\$ 500.00	\$ 500	\$ 558	\$ 613	\$ 675	
	Backhoe to Lay pipe - 3 pipes/hr	day	19	\$ 500.00	\$ 9,271	\$ 10,337	\$ 11,371	\$ 12,508	
	Operator	hr	148	\$ 50.00	\$ 7,417	\$ 8,270	\$ 9,097	\$ 10,006	
	Labour to join 21' lengths together	hr	297	\$ 50.00	\$ 14,833	\$ 16,539	\$ 18,193	\$ 20,012	
	Excavate trench 5ft deep 2ft wide for 9344 ft	LF	9344	\$ 3.52	\$ 32,891	\$ 36,673	\$ 40,341	\$ 44,375	
	Assume additional 3ft of trench required per well to connect to distribution pipe	LF	297	\$ 3.52	\$ 1,045	\$ 1,166	\$ 1,282	\$ 1,410	
	Place & Compact bedding material	CY	714	\$ 18.61	\$ 13,290	\$ 14,819	\$ 16,301	\$ 17,931	
	Backfill trench using on-site borrow	CY	2856	\$ 5.69	\$ 16,251	\$ 18,119	\$ 19,931	\$ 21,925	
	Allow for 5 3ft concrete drop boxes	EA	5	\$ 1,140.00	\$ 5,700	\$ 6,356	\$ 6,991	\$ 7,690	
	Backhoe to install drop boxes	Day	5	\$ 500.00	\$ 2,500	\$ 2,788	\$ 3,066	\$ 3,373	
	Operator	Operator	40	\$ 50.00	\$ 2,000	\$ 2,230	\$ 2,453	\$ 2,698	
	Labour	hr	40	\$ 50.00	\$ 2,000	\$ 2,230	\$ 2,453	\$ 2,698	
	Dewater Trench - Pumps	week	5	\$ 555.00	\$ 2,775	\$ 3,094	\$ 3,404	\$ 3,744	
	Labour to maintain pumps	hr	40	\$ 50.00	\$ 2,000	\$ 2,230	\$ 2,453	\$ 2,698	
	Soil Testing prior to disposal	LS	1	\$ 750.00	\$ 531	\$ 592	\$ 651	\$ 716	
	Load out soil for haul to disposal facility	TN	849	\$ 20.00	\$ 16,980	\$ 18,933	\$ 20,826	\$ 22,909	
	Dispose of borrow to Sub-title D Landfill	TN	849	\$ 50.00	\$ 42,450	\$ 47,332	\$ 52,065	\$ 57,271	\$ 239,385
Connect Extraction Wells to Distribution Pipe									
	90 degree pipe bends	EA	297	\$ 13.50	\$ 4,010	\$ 4,471	\$ 4,918	\$ 5,409	
	Nipple pipe	LF	1188	\$ 15.38	\$ 18,271	\$ 20,373	\$ 22,410	\$ 24,651	
	Weld pipe to header distribution pipe	hr	297	\$ 50.00	\$ 14,850	\$ 16,558	\$ 18,214	\$ 20,035	
	Weld material for MIG welding	LS	99	\$ 50.00	\$ 4,950	\$ 5,519	\$ 6,071	\$ 6,678	
	Labour for connection - 3hrs each x 2	hr	594	\$ 50.00	\$ 29,700	\$ 33,116	\$ 36,427	\$ 40,070	\$ 96,843
Connect Clay Soil Extraction System to Distribution Pipe									
	90 degree pipe bends	ea	18	\$ 13.50	\$ 243	\$ 271	\$ 298	\$ 328	
	Nipple pipe	LF	72	\$ 15.38	\$ 1,107	\$ 1,235	\$ 1,358	\$ 1,494	
	Weld pipe to header distribution pipe	hr	24	\$ 50.00	\$ 1,200	\$ 1,338	\$ 1,472	\$ 1,619	
	Weld material for MIG welding	LS	8	\$ 50.00	\$ 400	\$ 446	\$ 491	\$ 540	
	Backhoe to dig connection	day	2	\$ 500.00	\$ 1,000	\$ 1,115	\$ 1,227	\$ 1,349	
	Operator	hr	16	\$ 50.00	\$ 800	\$ 892	\$ 981	\$ 1,079	\$ 6,409
Supply of 3" Carbon Steel Distribution Pipe									
	3" C Steel pipe	FT	9344	\$ 7.50	\$ 70,080	\$ 78,139	\$ 85,953	\$ 94,548	
	Delivery	LS	1	\$ 500.00	\$ 500	\$ 558	\$ 613	\$ 675	
	Unloading & Spreadout - Backhoe	day	3	\$ 500.00	\$ 1,500	\$ 1,673	\$ 1,840	\$ 2,024	
	Operator	hr	24	\$ 50.00	\$ 1,200	\$ 1,338	\$ 1,472	\$ 1,619	
	Labour	hr	48	\$ 50.00	\$ 2,400	\$ 2,676	\$ 2,944	\$ 3,238	
	Flat bed truck	day	3	\$ 200.00	\$ 600	\$ 669	\$ 736	\$ 809	
	Allow for 15 90 degree bends	ea	15	\$ 13.50	\$ 203	\$ 226	\$ 248	\$ 273	
	Allow for 15 45 degree bends	ea	15	\$ 17.00	\$ 255	\$ 284	\$ 313	\$ 344	\$ 103,530
Install Trench (4032LF) Clay Soil Extraction System									
	Excavate trench to 8 feet deep & batter sides at 1:1	CY	8363						
	Surveying Services	LS	1	\$ 2,000.00	\$ 2,000	\$ 2,230	\$ 2,453	\$ 2,698	
	General Safety Equipment & PPE controls	LS	1	\$ 3,000.00	\$ 3,000	\$ 3,345	\$ 3,680	\$ 4,047	
	20T Excavator - Mob	LS	1	\$ 600.00	\$ 600	\$ 669	\$ 736	\$ 809	
	20 T Excavator	day	9	\$ 800.00	\$ 7,433	\$ 8,288	\$ 9,117	\$ 10,029	
	Operator	hr	74	\$ 50.00	\$ 3,717	\$ 4,144	\$ 4,559	\$ 5,014	
	Excavate trench to a further 7 feet for placement of trench box	CY	3136						
	20T Excavator	day	3	\$ 800.00	\$ 2,788	\$ 3,108	\$ 3,419	\$ 3,761	
	Operator	hr	28	\$ 50.00	\$ 1,394	\$ 1,554	\$ 1,709	\$ 1,880	
	Install 24ft long trench box - mob	LS	1	\$ 180.00	\$ 180	\$ 201	\$ 221	\$ 243	
	Hire Trench Box	day	30	\$ 74.87	\$ 2,246	\$ 2,504	\$ 2,755	\$ 3,030	
	Additional Safety Equipment Hire	LS	1	\$ 2,000.00	\$ 2,000	\$ 2,230	\$ 2,453	\$ 2,698	
	20T Excavator time to move trench box & re-batter	day	8	\$ 800.00	\$ 6,400	\$ 7,136	\$ 7,850	\$ 8,635	
	Operator	hr	64	\$ 50.00	\$ 3,200	\$ 3,568	\$ 3,925	\$ 4,317	
	Install Pipe with 20T excavator	day	12	\$ 800.00	\$ 9,600	\$ 10,704	\$ 11,774	\$ 12,952	
	Operator	hr	96	\$ 50.00	\$ 4,800	\$ 5,352	\$ 5,887	\$ 6,476	
	Slotted carbon steel pipe	FT	4032	\$ 9.00	\$ 36,288	\$ 40,461	\$ 44,507	\$ 48,958	
	6" Stainless steel pipe to GL	FT	90	\$ 50.00	\$ 4,500	\$ 5,018	\$ 5,519	\$ 6,071	
	2 Labour to connect pipe 3 pipes per hr x 2 guys	hr	128	\$ 50.00	\$ 6,400	\$ 7,136	\$ 7,850	\$ 8,635	
	Supply Crushed blue stone 1.5" minus	CY	896	\$ 38.36	\$ 34,371	\$ 38,323	\$ 42,155	\$ 46,371	
	20T Excavator to spread	day	4	\$ 800.00	\$ 3,200	\$ 3,568	\$ 3,925	\$ 4,317	
	Dewater Trench - Pumps	week	10	\$ 555.00	\$ 5,550	\$ 6,188	\$ 6,807	\$ 7,488	
	Labour to maintain pumps	hr	80	\$ 50.00	\$ 4,000	\$ 4,460	\$ 4,906	\$ 5,397	
	Supply & Install Filter Fabric	SY	15232	\$ 3.88	\$ 59,100	\$ 65,897	\$ 72,486	\$ 79,735	
	Backfill Trench with 10' sand	CY	5973	\$ 18.61	\$ 111,164	\$ 123,948	\$ 136,342	\$ 149,977	
	Backfill trench with on-site borrow 3' deep	CY	1792	\$ 5.69	\$ 10,196	\$ 11,369	\$ 12,506	\$ 13,757	
	Soil Testing prior to disposal	LS	10	\$ 750.00	\$ 7,168	\$ 7,992	\$ 8,792	\$ 9,671	
	Load out borrow	TN	11469	\$ 20.00	\$ 229,376	\$ 255,754	\$ 281,330	\$ 309,463	
	Dispose of borrow	TN	11469	\$ 40.00	\$ 458,752	\$ 511,508	\$ 562,659	\$ 618,925	\$ 1,375,354
Install Infiltration Bed * PVC Pipe									
	Survey Services	LS	1	\$ 2,000.00	\$ 2,000	\$ 2,230	\$ 2,453	\$ 2,698	
	General Safety Equipment & PPE controls	LS	1	\$ 2,000.00	\$ 2,000	\$ 2,230	\$ 2,453	\$ 2,698	
	Excavation of trench - backhoe	day	11	\$ 500.00	\$ 5,360	\$ 5,976	\$ 6,574	\$ 7,231	
	Operator	hr	86	\$ 50.00	\$ 4,288	\$ 4,781	\$ 5,259	\$ 5,785	
	Backfill with borrow	CY	4824	\$ 5.69	\$ 27,449	\$ 30,605	\$ 33,666	\$ 37,032	
	Testing of soil prior to disposal	LS	6	\$ 750.00	\$ 4,824	\$ 5,379	\$ 5,917	\$ 6,508	
	Load out soils for disposal	TN	7718	\$ 20.00	\$ 154,368	\$ 172,120	\$ 189,332	\$ 208,266	
	Dispose of borrow	TN	7718	\$ 40.00	\$ 308,736	\$ 344,241	\$ 378,665	\$ 416,531	

**Detailed Costing
Groundwater Treatment System
Maine Yankee Facility, Wiscasset, Maine**

	Backfill with crushed stone	CY	4824	\$ 38.36	\$ 185,049	\$ 206,329	\$ 226,962	\$ 249,658		
	PVC Pipe - slotted	LF	3183	\$ 5.90	\$ 18,792	\$ 20,954	\$ 23,049	\$ 25,354		
	PVC Pipe - distribute across site - flatbed truck	day	1	\$ 200.00	\$ 200	\$ 223	\$ 245	\$ 270		
	Install PVC pipe - labour	hr	32	\$ 50.00	\$ 1,600	\$ 1,784	\$ 1,962	\$ 2,159	\$ 964,191	
Connect Infiltration Bed to WWTP										
	Survey Services	LS	1	\$ 2,000.00	\$ 2,000	\$ 2,230	\$ 2,453	\$ 2,698		
	PVC Pipe - unslotted 4" Installed	LF	3169	\$ 4.92	\$ 15,591	\$ 17,385	\$ 19,123	\$ 21,035		
	Allow for 6 90 degree ells	LS	6	\$ 76.56	\$ 459	\$ 512	\$ 563	\$ 620		
	Allow for 6 45 degree ells	LS	6	\$ 76.87	\$ 461	\$ 514	\$ 566	\$ 622		
	Excavate Trench 4' deep 2' wide for 3169 LF	LF	3169	\$ 3.52	\$ 11,155	\$ 12,438	\$ 13,681	\$ 15,050		
	Dewater Trench - Pumps	week	4	\$ 555.00	\$ 2,220	\$ 2,475	\$ 2,723	\$ 2,995		
	Labour to maintain pumps	hr	32	\$ 50.00	\$ 1,600	\$ 1,784	\$ 1,962	\$ 2,159		
	Backfill Trench with bedding material	CY	463	\$ 18.61	\$ 8,616	\$ 9,607	\$ 10,568	\$ 11,625		
	Backfill Trench with borrow	CY	1390	\$ 5.69	\$ 7,909	\$ 8,819	\$ 9,701	\$ 10,671		
	Soil Testing prior to disposal	LS	1	\$ 750.00	\$ 750	\$ 836	\$ 920	\$ 1,012		
	Dispose of borrow	TN	741	\$ 40.00	\$ 29,640	\$ 33,049	\$ 36,353	\$ 39,989	\$ 108,475	
Install Sump System Including Pumps										
	6 sumps total = 6 sump pumps	LS	6	\$ 4,378.00	\$ 26,268	\$ 29,289	\$ 32,218	\$ 35,439		
	Installation	LS	6	\$ 500.00	\$ 3,000	\$ 3,345	\$ 3,680	\$ 4,047		
	Generator	LS	1	\$ 2,695.00	\$ 2,695	\$ 3,005	\$ 3,305	\$ 3,636		
	Fuel Requirements for 1 year for Generator	gal	91	\$ 2.00	\$ 183	\$ 203	\$ 224	\$ 246		
	1.5" stainless steel pipe for discharge through pump	LF	90	\$ 9.80	\$ 882	\$ 983	\$ 1,082	\$ 1,190		
	8 welds needed - labour 3hrs per weld	hr	24	\$ 50.00	\$ 1,200	\$ 1,338	\$ 1,472	\$ 1,619		
	Welding equipment	LS	5	\$ 50.00	\$ 250	\$ 279	\$ 307	\$ 337		
	box culvert	EA	6	\$ 1,140.00	\$ 6,840	\$ 7,627	\$ 8,389	\$ 9,228		
	Install - 20T Excavator	day	3	\$ 500.00	\$ 1,500	\$ 1,673	\$ 1,840	\$ 2,024		
	Operator	hr	24	\$ 50.00	\$ 1,200	\$ 1,338	\$ 1,472	\$ 1,619		
	Labour	hr	24	\$ 50.00	\$ 1,200	\$ 1,338	\$ 1,472	\$ 1,619	\$ 61,005	
Install pumps for extraction wells										
	Submersible pumps - supply	LS	99	\$ 567.00	\$ 56,133	\$ 62,588	\$ 68,847	\$ 75,732		
	Installation	LS	99	\$ 200.00	\$ 19,800	\$ 22,077	\$ 24,285	\$ 26,713		
	1.5" stainless steel pipe for discharge through pump	LF	5672	\$ 9.80	\$ 55,586	\$ 61,978	\$ 68,176	\$ 74,993		
	Generator	LS	4	\$ 2,695.00	\$ 10,780	\$ 12,020	\$ 13,222	\$ 14,544		
	Fuel Requirements for 1 year for Generator	gal	2190	\$ 2.00	\$ 4,380	\$ 4,884	\$ 5,372	\$ 5,909	\$ 197,891	
Connect Distribution Pipe to WWTP										
	Welding Carbon Steel Pipe to Main Header Pipe - labour	hr	12	\$ 50.00	\$ 600	\$ 669	\$ 736	\$ 809		
	Welding equipment	LS	4	\$ 50.00	\$ 200	\$ 223	\$ 245	\$ 270		
	Labour to connect	hr	32	\$ 50.00	\$ 1,600	\$ 1,784	\$ 1,962	\$ 2,159		
	Box Culvert	LS	1	\$ 1,140.00	\$ 1,140	\$ 1,271	\$ 1,398	\$ 1,538		
	90 degree ells	EA	4	\$ 13.50	\$ 54	\$ 60	\$ 66	\$ 73		
	Nipple pipe	LF	4	\$ 15.38	\$ 62	\$ 69	\$ 75	\$ 83		
	Sump pump to main WWTP inlet tank	EA	1	\$ 610.00	\$ 610	\$ 680	\$ 748	\$ 823		
	3" carbon steel pipe	LF	8	\$ 7.50	\$ 60	\$ 67	\$ 74	\$ 81		
	Backhoe	day	2	\$ 500.00	\$ 1,000	\$ 1,115	\$ 1,227	\$ 1,349		
	Operator	hr	16	\$ 50.00	\$ 800	\$ 892	\$ 981	\$ 1,079	\$ 8,264	
Install Sand Layer Extraction Wells										
	Estimate from D. Blitzer/NJO	LS	1	\$ 72,416.00	\$ 72,416	\$ 80,744	\$ 88,818	\$ 97,700		
	Allow for additional \$ for water management @ 500/wk	WK	7.2	\$ 500.00	\$ 3,600	\$ 4,014	\$ 4,415	\$ 4,857	\$ 102,557	
Install Bedrock Extraction Wells										
	Estimate from D. Blitzer/NJO	LS	1	\$ 865,121.00	\$ 865,121	\$ 964,610	\$ 1,061,071	\$ 1,167,178		
	Allow for additional \$ for water management @ 500/wk	WK	69.6	\$ 500.00	\$ 34,800	\$ 38,802	\$ 42,682	\$ 46,950	\$ 1,214,128	
G.A.C. System										
	GAC Installation & Purchase	LS	1	\$ 8,280.00	\$ 8,280	\$ 9,232	\$ 10,155	\$ 11,171		
	GAC On Site Carbon Changeout	mo	12	\$ 2,500.00	\$ 30,000	\$ 33,450	\$ 36,795	\$ 40,475	\$ 51,645	
WWTP General Construction Items										
	Equilization System 1,500gal tank with feed pump	LS	1	\$ 15,000.00	\$ 15,000	\$ 16,725	\$ 18,398	\$ 20,237		
	Operators to run - Assume 1 Senior	hr	2080	\$ 80.00	\$ 166,400	\$ 185,536	\$ 204,090	\$ 224,499		
	Operators to run - Assume 2 Technicians	hr	10840	\$ 50.00	\$ 542,000	\$ 604,330	\$ 664,763	\$ 731,239		
	Polymer Changeout/Disposal	mo	12	\$ 20.00	\$ 240	\$ 268	\$ 294	\$ 324		
	PLC Control System	LS	1	\$ 40,000.00	\$ 40,000	\$ 44,600	\$ 49,060	\$ 53,966	\$ 1,030,265	
Microfiltration System										
	Incl microfiltration, sludge thickener, filter press & makeup tank	LS	1	\$ 175,000.00	\$ 175,000	\$ 195,125	\$ 214,638	\$ 236,101	\$ 236,101	
Reverse Osmosis System										
	Incl collection tank, equilization tank & pumps	LS	1	\$ 80,000.00	\$ 80,000	\$ 89,200	\$ 98,120	\$ 107,932		
	Power system for R.Osmosis	hr	8,760	\$ 0.15	\$ 1,314	\$ 1,465	\$ 1,612	\$ 1,773		
	Chemistry Costs for R.Osmosis	day	3,650	\$ 10.00	\$ 36,500	\$ 40,698	\$ 44,767	\$ 49,244	\$ 158,949	
Maintain WWTP - Annual Cost										
	Operators to run - Assume 1 Senior	hr	2080	\$ 80.00	\$ 166,400	\$ 185,536	\$ 204,090	\$ 224,499		
	Operators to run - Assume 2 Technicians	hr	10840	\$ 50.00	\$ 542,000	\$ 604,330	\$ 664,763	\$ 731,239		
	Carbon Changeout	mo	12	\$ 2,500.00	\$ 30,000	\$ 33,450	\$ 36,795	\$ 40,475		
	Polymer Changeout/Disposal	mo	12	\$ 2,500.00	\$ 30,000	\$ 33,450	\$ 36,795	\$ 40,475		
	Power system for R.Osmosis	hr	8,760	\$ 0.15	\$ 1,314	\$ 1,465	\$ 1,612	\$ 1,773		
	Chemistry Costs for R.Osmosis	day	3,650	\$ 10.00	\$ 36,500	\$ 40,698	\$ 44,767	\$ 49,244		
	Maintenance on WWTP - Assume 1% of capital annually	%	1%	\$ 2,304,058	\$ 23,041	\$ 25,690	\$ 28,259	\$ 31,085	\$ 1,118,789	

Drilling Estimate
Overburden Groundwater Extraction Wells
Maine Yankee Facility, Wiscasset, Maine

Line	Item Description	Estimated Quantity	Unit of Measure	Unit Price	Amount (\$)
1 Mobilization & Demobilization					
	Mob./Demob. Hollow Stem Augur Rig & Equipment to Site	1	Lump Sum	5,000.00	\$5,000.00
	Temporary Decon Pad	1	each	500.00	\$500.00
	Drilling Location Setup/Restoration	12	each	33.00	\$396.00
	Crew per diem subsistence (per man per day - 2 man crew)	36	Man/day	125.00	\$4,500.00
2 Hollow Stem Auger Drilling					
	8 1/4" Hollow Stem Augur Drilling (0-100 ft bgs)	292	Foot	40.00	\$11,680.00
	2" Split Spoon Samples (every 5 feet)	60	each	15.00	\$900.00
3 Well Construction Labor & Materials - SVE					
	6" Well Installation, Labor/Materials (except pipe)	292	Foot	60.00	\$17,520.00
	6" Stainless Steel Riser	196	Foot	50.00	\$9,800.00
	6" Stainless Steel Screen - 20 Slot (10ft per well)	12	each	600.00	\$7,200.00
4 Equipment Utilization					
	55-gallon DRUM, DOT approved, type 17H (PPE and Temporary IDW Storage)	8	Each	40.00	\$320.00
	Wooden Pallets	4	Each	50.00	\$200.00
5 Crew Incidental Work					
	Decon Labor (1 man and equipment)	24	hour	150.00	\$3,600.00
	IDW Management (Collection, Storage, Transportation to onsite IDW staging area. Dewatering Drilling Frag, Transferring soils to rolloff)	12	hour	150.00	\$1,800.00
6 OTHER (Specify)					
	Development (5 Hours Per well)	60	hour	150.00	\$9,000.00
					\$0.00
					\$0.00
T	Total Estimate				\$72,416.00
L	Estimated Duration of Drilling Program (days)				36

Notes:

N/A = Not Applicable Man/day = Per Man Per Day Crew/hr = Per Work Crew Per Hour

- Work days are assumed to be 10 hours per day. Work cycles are assumed to be 5-day (Mon thru Fri.) shifts followed by 2-day breaks.

Drilling Estimate
Bedrock Groundwater Extraction Wells
Maine Yankee Facility, Wiscasset, Maine

Line	Item Description	Estimated Quantity	Unit of Measure	Unit Price	Amount (\$)
1 Mobilization & Demobilization					
	Mob./Demob. Air Rotary Rig & Equipment to Site	1	Lump Sum	5,000.00	\$5,000.00
	Temporary Decontamination Pad - Labor & Materials (const/maint/ demo)	1	Lump Sum	500.00	\$500.00
	Drilling Location Setup/Restoration	87	Each	33.00	\$2,871.00
	Crew per diem subsistence (per man per day - 3 man crew)	348	Man/day	150.00	\$52,200.00
2 Air Rotary Drilling					
	14" Air Rotary Drilling (0-100 ft bgs)	2335	Foot	80	\$186,800.00
	10" Air Rotary Drilling (0-100 ft bgs)	3045	Foot	60	\$182,700.00
3 Well Construction Labor & Materials					
	10" Isolation Casing Installation , Labor and Materials	2335	Foot	30	\$70,050.00
	6" Well Installation, Labor and Materials (except pipe)	1900	Foot	60	\$114,000.00
	6" Stainless Steel Riser	1820	Foot	50	\$91,000.00
	6" - Stainless Steel Screen - 20 Slot	87	Each	600	\$52,200.00
4 Well Development					
	Well Development - Labor & Equipment (5 hrs per well)	435	Hour	150	\$65,250.00
5 Equipment Utilization					
	Portable Containment For Air Frag/Water	40	Day	20	\$800.00
	55-gallon DRUM, DOT approved, type 17H (PPE)	60	Each	40	\$2,400.00
	Wooden Pallets	4	Each	50	\$200.00
6 Crew Incidental Work					
	Decon Labor (1 man and equipment)-2hrs per well	174	hour	150	\$26,100.00
	IDW Management (Collection, Storage, Transportation to onsite IDW staging area. Dewatering Drilling Frag, Transferring solids to rolloff	87	hour	150	\$13,050.00
7 OTHER (Specify)					
					\$0.00
					\$0.00
					\$0.00
T	Total Estimate				\$865,121.00
L	Estimated Duration of Drilling Program (days)				348

Notes:

N/A = Not Applicable Man/day = Per Man Per Day Crew/hr = Per Work Crew Per Hour

- Work days are assumed to be 10 hours per day. Work cycles are assumed to be 5-day (Mon thru Fri.) shifts followed by 2-day breaks.