APPENDIX D

Cost Over Time Reports for MWL Corrective Measures Alternatives

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Phase Element Cost Over Time Report (without Markups)

Folder: MWL Corrective Measures Study Al

Project

Name: MWL Corrective Measures Study Alternatives
ID: MWL Corrective Measures Study Alternatives
Location: ALBUQUERQUE, NEW MEXICO
Modifiers: **Material** 0.935
Labor 1.031
Equipment 0.949
Category: None
Report Option: Fiscal Year

Site

Name: No Further Action Alternatives
ID: No Further Action Alternatives
Type: None

Phase Element

Name: MWL I.a - NFA With Institutional Controls
Type: Long Term Monitoring
Labor Rate Group: System Labor Rate
Analysis Rate Group: System Analysis Rate
Approach: None
Start Date: 10/1/2006
Media/Waste Type: Solids
Secondary Media/Waste Type: Soil
Contaminant: Low Level Radioactive
Secondary Contaminant: Metals
Markup Template: System Defaults
O&M Markup Template: N/A
Description: Under this alternative, the existing operational cover would be maintained and current institutional controls would continue for the forseeable future. Soil would be added to the existing landfill surface to bring the operational cover to a central crown and uniform grade to prevent ponding and promote surface runoff. Estimated costs for groundwater, soil, vegetation, and air monitoring for 30 years are included. Estimated costs for seeding, mulching, grading, erosion control, signage, and fencing are also included.

Phase Element Cost Over Time Report
(without Markups)

Technology	2007	2008	2009	2010	2011	2012
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Fencing	$30,600	$0	$0	$0	$0	$0
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Cleanup and Landscaping	$39,335	$0	$0	$0	$0	$0
Access Roads	$78,082	$0	$0	$0	$0	$0
Total Phase Element Cost	$179,154	$31,137	$31,137	$31,137	$31,137	$31,137
Escalation Factor	1.1421	1.1673	1.1930	1.2194	1.2463	1.2734
Escalated Phase Element Cost	$204,612	$36,346	$37,146	$37,968	$38,806	$39,650

Phase Element Cost Over Time Report
(without Markups)

Technology	2013	2014	2015	2016	2017	2018
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Fencing	$0	$0	$0	$0	$0	$0
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Access Roads	$0	$0	$0	$0	$0	$0
Total Phase Element Cost	$31,137	$31,137	$31,137	$31,137	$31,137	$31,137
Escalation Factor	1.3006	1.3278	1.3549	1.3821	1.4093	1.4365
Escalated Phase Element Cost	$40,497	$41,344	$42,188	$43,034	$43,881	$44,728

Phase Element Cost Over Time Report
(without Markups)

Technology	2019	2020	2021	2022	2023	2024
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Fencing	$0	$0	$0	$0	$0	$0
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Access Roads	$0	$0	$0	$0	$0	$0
Total Phase Element Cost	$31,137	$31,137	$31,137	$31,137	$31,137	$31,137
Escalation Factor	1.4636	1.4908	1.5180	1.5451	1.5723	1.5995
Escalated Phase Element Cost	$45,572	$46,419	$47,266	$48,110	$48,957	$49,804

Phase Element Cost Over Time Report
(without Markups)

Technology	2025	2026	2027	2028	2029	2030
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Fencing	$0	$0	$0	$0	$0	$0
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Access Roads	$0	$0	$0	$0	$0	$0
Total Phase Element Cost	$31,137	$31,137	$31,137	$31,137	$31,137	$31,137
Escalation Factor	1.6267	1.6538	1.6810	1.7082	1.7354	1.7625
Escalated Phase Element Cost	$50,651	$51,494	$52,341	$53,188	$54,035	$54,879

Phase Element Cost Over Time Report
(without Markups)

Technology	2031	2032	2033	2034	2035	2036
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Fencing	$0	$0	$0	$0	$0	$0
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Access Roads	$0	$0	$0	$0	$0	$0
Total Phase Element Cost	$31,137	$31,137	$31,137	$31,137	$31,137	$31,137
Escalation Factor	1.7897	1.8169	1.8440	1.8712	1.8984	1.9256
Escalated Phase Element Cost	$55,726	$56,573	$57,417	$58,264	$59,110	$59,957

Phase Element Cost Over Time Report
(without Markups)

Technology	Total
Monitoring	$864,000
Fencing	$30,600
Monitoring	$70,110
Cleanup and Landscaping	$39,335
Access Roads	$78,082
Total Phase Element Cost	$1,082,127
Escalation Factor	
Escalated Phase Element Cost	$1,599,963

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Phase Element Cost Over Time Report (without Markups)

Folder: MWL Corrective Measures Study Al

Project

Name: MWL Corrective Measures Study Alternatives
ID: MWL Corrective Measures Study Alternatives
Location: ALBUQUERQUE, NEW MEXICO
Modifiers: **Material** 0.935
Labor 1.031
Equipment 0.949
Category: None
Report Option: Fiscal Year

Site

Name: Containment Alternatives
ID: Containment Alternatives
Type: None

Phase Element

Name: MWL III.a - Bio-intrusion Barrier
Type: Remedial Action
Labor Rate Group: System Labor Rate
Analysis Rate Group: System Analysis Rate
Approach: In Situ
Start Date: 10/1/2006
Media/Waste Type: Solids
Secondary Media/Waste Type: Soil
Contaminant: Low Level Radioactive
Secondary Contaminant: Metals
Markup Template: System Defaults
O&M Markup Template: System Defaults
Description: Under this alternative, a bio-intrusion barrier would be deployed on the existing operational cover. The barrier would be composed of a layer of cobbles or boulders to limit intrusion of deep-rooted plants and burrowing mammals. The barrier would be constructed once the landfill surface was centrally crowned and brought to a uniform grade. Estimated costs for groundwater, vadose zone, soil, vegetation, and air monitoring for 30 years are included. Estimated costs for seeding, mulching, grading, erosion control, signage, and fencing are also included.

Phase Element Cost Over Time Report
(without Markups)

Technology	2007	2008	2009	2010	2011	2012
Clear and Grub	$55,616	$0	$0	$0	$0	$0
Capping	$444,548	$0	$0	$0	$0	$0
Professional Labor Management	$165,516	$0	$0	$0	$0	$0
Fencing	$18,089	$0	$0	$0	$0	$0
Operations and Maintenance	$7,315	$11,627	$24,563	$11,627	$24,563	$24,563
Cleanup and Landscaping	$18,508	$0	$0	$0	$0	$0
Access Roads	$78,082	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$158,922	$0	$0	$0	$0	$0
Total Phase Element Cost	$988,675	$53,706	$66,642	$53,706	$66,642	$66,642
Escalation Factor	1.1421	1.1673	1.1930	1.2194	1.2463	1.2734
Escalated Phase Element Cost	$1,129,166	$62,691	$79,504	$65,489	$83,056	$84,862

Phase Element Cost Over Time Report
(without Markups)

Technology	2013	2014	2015	2016	2017	2018
Clear and Grub	$0	$0	$0	$0	$0	$0
Capping	$0	$0	$0	$0	$0	$0
Professional Labor Management	$0	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$0	$0	$0
Operations and Maintenance	$11,627	$24,563	$11,627	$46,124	$24,563	$11,627
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Access Roads	$0	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$0	$0	$0	$0	$0	$0
Total Phase Element Cost	$53,706	$66,642	$53,706	$88,203	$66,642	$53,706
Escalation Factor	1.3006	1.3278	1.3549	1.3821	1.4093	1.4365
Escalated Phase Element Cost	$69,850	$88,487	$72,766	$121,905	$93,919	$77,149

Phase Element Cost Over Time Report
(without Markups)

Technology	2019	2020	2021	2022	2023	2024
Clear and Grub	$0	$0	$0	$0	$0	$0
Capping	$0	$0	$0	$0	$0	$0
Professional Labor Management	$0	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$0	$0	$0
Operations and Maintenance	$24,563	$11,627	$24,563	$24,563	$11,627	$24,563
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Access Roads	$0	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$0	$0	$0	$0	$0	$0
Total Phase Element Cost	$66,642	$53,706	$66,642	$66,642	$53,706	$66,642
Escalation Factor	1.4636	1.4908	1.5180	1.5451	1.5723	1.5995
Escalated Phase Element Cost	$97,537	$80,065	$101,163	$102,969	$84,442	$106,594

Phase Element Cost Over Time Report
(without Markups)

Technology	2025	2026	2027	2028	2029	2030
Clear and Grub	$0	$0	$0	$0	$0	$0
Capping	$0	$0	$0	$0	$0	$0
Professional Labor Management	$0	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$0	$0	$0
Operations and Maintenance	$11,627	$46,124	$24,563	$11,627	$24,563	$11,627
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Access Roads	$0	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$0	$0	$0	$0	$0	$0
Total Phase Element Cost	$53,706	$88,203	$66,642	$53,706	$66,642	$53,706
Escalation Factor	1.6267	1.6538	1.6810	1.7082	1.7354	1.7625
Escalated Phase Element Cost	$87,364	$145,870	$112,025	$91,741	$115,651	$94,657

Phase Element Cost Over Time Report
(without Markups)

Technology	2031	2032	2033	2034	2035	2036
Clear and Grub	$0	$0	$0	$0	$0	$0
Capping	$0	$0	$0	$0	$0	$0
Professional Labor Management	$0	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$0	$0	$0
Operations and Maintenance	$24,563	$24,563	$11,627	$24,563	$11,627	$46,124
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Access Roads	$0	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$0	$0	$0	$0	$0	$0
Total Phase Element Cost	$66,642	$66,642	$53,706	$66,642	$53,706	$88,203
Escalation Factor	1.7897	1.8169	1.8440	1.8712	1.8984	1.9256
Escalated Phase Element Cost	$119,269	$121,082	$99,034	$124,701	$101,955	$169,844

Phase Element Cost Over Time Report
(without Markups)

Technology	2037	Total
Clear and Grub	$0	$55,616
Capping	$0	$444,548
Professional Labor Management	$0	$165,516
Fencing	$0	$18,089
Operations and Maintenance	$0	$629,093
Cleanup and Landscaping	$0	$18,508
Access Roads	$0	$78,082
Monitoring	$0	$864,000
Monitoring	$0	$70,110
Monitoring	$0	$328,260
Vadose Zone Monitoring System	$0	$158,922
Total Phase Element Cost	$0	$2,830,744
Escalation Factor	1.9527	
Escalated Phase Element Cost	$0	$3,984,807

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Phase Element Cost Over Time Report (without Markups)

Folder: MWL Corrective Measures Study Al

Project

Name: MWL Corrective Measures Study Alternatives
ID: MWL Corrective Measures Study Alternatives
Location: ALBUQUERQUE, NEW MEXICO
Modifiers: **Material** 0.935
Labor 1.031
Equipment 0.949
Category: None
Report Option: Fiscal Year

Site

Name: Containment Alternatives
ID: Containment Alternatives
Type: None

Phase Element

Name: MWL III.b - Vegetative Soil Cover
Type: Remedial Action
Labor Rate Group: System Labor Rate
Analysis Rate Group: System Analysis Rate
Approach: Ex Situ
Start Date: 10/1/2006
Media/Waste Type: N/A
Secondary Media/Waste Type: N/A
Contaminant: None
Secondary Contaminant: None
Markup Template: System Defaults
O&M Markup Template: System Defaults
Description: Under this alternative, a vegetative soil cover would be deployed on the existing operational cover. The vegetative soil cover would be composed of multiple lifts of compacted soil to isolate buried waste from the surface environment and to minimize infiltration of water. A topsoil layer, admixed with gravel, would be vegetated with native plants to mitigate surface erosion and to promote evapotranspiration. A cover constructed of natural soil will perform with minimal maintenance by emulating the natural analog ecosystem. Estimated costs for groundwater, vadose zone, soil, vegetation, and air monitoring for 30 years are included. Estimated costs for seeding, mulching, grading, erosion control, signage, and fencing are also included.

Phase Element Cost Over Time Report
(without Markups)

Technology	2007	2008	2009	2010	2011	2012
Access Roads	$78,082	$0	$0	$0	$0	$0
Professional Labor Management	$181,093	$0	$0	$0	$0	$0
Operations and Maintenance	$4,756	$6,510	$11,772	$6,510	$11,772	$11,772
Capping	$180,805	$0	$0	$0	$0	$0
Fencing	$18,089	$0	$0	$0	$0	$0
Clear and Grub	$55,616	$0	$0	$0	$0	$0
Cleanup and Landscaping	$18,508	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$158,922	$0	$0	$0	$0	$0
Total Phase Element Cost	$737,950	$48,589	$53,851	$48,589	$53,851	$53,851
Escalation Factor	1.1421	1.1673	1.1930	1.2194	1.2463	1.2734
Escalated Phase Element Cost	$842,813	$56,718	$64,244	$59,249	$67,115	$68,574

Phase Element Cost Over Time Report
(without Markups)

Technology	2013	2014	2015	2016	2017	2018
Access Roads	$0	$0	$0	$0	$0	$0
Professional Labor Management	$0	$0	$0	$0	$0	$0
Operations and Maintenance	$6,510	$11,772	$6,510	$20,541	$11,772	$6,510
Capping	$0	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$0	$0	$0
Clear and Grub	$0	$0	$0	$0	$0	$0
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$0	$0	$0	$0	$0	$0
Total Phase Element Cost	$48,589	$53,851	$48,589	$62,620	$53,851	$48,589
Escalation Factor	1.3006	1.3278	1.3549	1.3821	1.4093	1.4365
Escalated Phase Element Cost	$63,195	$71,503	$65,833	$86,547	$75,892	$69,798

Phase Element Cost Over Time Report
(without Markups)

Technology	2019	2020	2021	2022	2023	2024
Access Roads	$0	$0	$0	$0	$0	$0
Professional Labor Management	$0	$0	$0	$0	$0	$0
Operations and Maintenance	$11,772	$6,510	$11,772	$11,772	$6,510	$11,772
Capping	$0	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$0	$0	$0
Clear and Grub	$0	$0	$0	$0	$0	$0
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$0	$0	$0	$0	$0	$0
Total Phase Element Cost	$53,851	$48,589	$53,851	$53,851	$48,589	$53,851
Escalation Factor	1.4636	1.4908	1.5180	1.5451	1.5723	1.5995
Escalated Phase Element Cost	$78,816	$72,436	$81,746	$83,205	$76,396	$86,135

Phase Element Cost Over Time Report
(without Markups)

Technology	2025	2026	2027	2028	2029	2030
Access Roads	$0	$0	$0	$0	$0	$0
Professional Labor Management	$0	$0	$0	$0	$0	$0
Operations and Maintenance	$6,510	$20,541	$11,772	$6,510	$11,772	$6,510
Capping	$0	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$0	$0	$0
Clear and Grub	$0	$0	$0	$0	$0	$0
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$0	$0	$0	$0	$0	$0
Total Phase Element Cost	$48,589	$62,620	$53,851	$48,589	$53,851	$48,589
Escalation Factor	1.6267	1.6538	1.6810	1.7082	1.7354	1.7625
Escalated Phase Element Cost	$79,040	$103,561	$90,524	$83,000	$93,453	$85,638

Phase Element Cost Over Time Report
(without Markups)

Technology	2031	2032	2033	2034	2035	2036
Access Roads	$0	$0	$0	$0	$0	$0
Professional Labor Management	$0	$0	$0	$0	$0	$0
Operations and Maintenance	$11,772	$11,772	$6,510	$11,772	$6,510	$20,541
Capping	$0	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$0	$0	$0
Clear and Grub	$0	$0	$0	$0	$0	$0
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$0	$0	$0	$0	$0	$0
Total Phase Element Cost	$53,851	$53,851	$48,589	$53,851	$48,589	$62,620
Escalation Factor	1.7897	1.8169	1.8440	1.8712	1.8984	1.9256
Escalated Phase Element Cost	$96,377	$97,842	$89,598	$100,766	$92,241	$120,581

Phase Element Cost Over Time Report
(without Markups)

Technology	2037	Total
Access Roads	$0	$78,082
Professional Labor Management	$0	$181,093
Operations and Maintenance	$0	$309,307
Capping	$0	$180,805
Fencing	$0	$18,089
Clear and Grub	$0	$55,616
Cleanup and Landscaping	$0	$18,508
Monitoring	$0	$864,000
Monitoring	$0	$70,110
Monitoring	$0	$328,260
Vadose Zone Monitoring System	$0	$158,922
Total Phase Element Cost	$0	$2,262,792
Escalation Factor	1.9527	
Escalated Phase Element Cost	$0	$3,202,836

Cost Database Date: 2001

Cost Type: User-Defined

Print Date: 3/17/2003 10:00:23 AM

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Phase Element Cost Over Time Report (without Markups)

Folder: MWL Corrective Measures Study Al

Project

Name: MWL Corrective Measures Study Alternatives
ID: MWL Corrective Measures Study Alternatives
Location: ALBUQUERQUE, NEW MEXICO
Modifiers: **Material** 0.935
Labor 1.031
Equipment 0.949
Category: None
Report Option: Fiscal Year

Site

Name: Containment Alternatives
ID: Containment Alternatives
Type: None

Phase Element

Name: MWL III.c - Vegetative Soil Cover w/ Bio Barrier
Type: Remedial Action
Labor Rate Group: System Labor Rate
Analysis Rate Group: System Analysis Rate
Approach: Ex Situ
Start Date: 10/1/2006
Media/Waste Type: N/A
Secondary Media/Waste Type: N/A
Contaminant: None
Secondary Contaminant: None
Markup Template: System Defaults
O&M Markup Template: System Defaults
Description: Under this alternative, a biointrusion barrier composed of a layer of cobbles or boulders would be constructed on the existing operational cover before deployment of a vegetative soil cover. Estimated costs for groundwater, vadose zone, soil, vegetation, and air monitoring for 30 years are included. Estimated costs for seeding, mulching, grading, erosion control, signage and fencing are also included.

Phase Element Cost Over Time Report
(without Markups)

Technology	2007	2008	2009	2010	2011	2012
Professional Labor Management	$278,209	$0	$0	$0	$0	$0
Access Roads	$78,082	$0	$0	$0	$0	$0
Capping	$657,194	$0	$0	$0	$0	$0
Fencing	$18,089	$0	$0	$0	$0	$0
Operations and Maintenance	$9,452	$15,407	$33,273	$15,407	$33,273	$33,273
Clear and Grub	$55,616	$0	$0	$0	$0	$0
Cleanup and Landscaping	$18,508	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$158,922	$0	$0	$0	$0	$0
Total Phase Element Cost	$1,316,151	$57,486	$75,352	$57,486	$75,352	$75,352
Escalation Factor	1.1421	1.1673	1.1930	1.2194	1.2463	1.2734
Escalated Phase Element Cost	$1,503,176	$67,103	$89,895	$70,098	$93,911	$95,953

Cost Database Date: 2001

Cost Type: User-Defined

Print Date: 3/17/2003 10:00:43 AM

Phase Element Cost Over Time Report
(without Markups)

Technology	2013	2014	2015	2016	2017	2018
Professional Labor Management	$0	$0	$0	$0	$0	$0
Access Roads	$0	$0	$0	$0	$0	$0
Capping	$0	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$0	$0	$0
Operations and Maintenance	$15,407	$33,273	$15,407	$63,049	$33,273	$15,407
Clear and Grub	$0	$0	$0	$0	$0	$0
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$0	$0	$0	$0	$0	$0
Total Phase Element Cost	$57,486	$75,352	$57,486	$105,128	$75,352	$57,486
Escalation Factor	1.3006	1.3278	1.3549	1.3821	1.4093	1.4365
Escalated Phase Element Cost	$74,766	$100,052	$77,888	$145,297	$106,194	$82,579

Phase Element Cost Over Time Report
(without Markups)

Technology	2019	2020	2021	2022	2023	2024
Professional Labor Management	$0	$0	$0	$0	$0	$0
Access Roads	$0	$0	$0	$0	$0	$0
Capping	$0	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$0	$0	$0
Operations and Maintenance	$33,273	$15,407	$33,273	$33,273	$15,407	$33,273
Clear and Grub	$0	$0	$0	$0	$0	$0
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$0	$0	$0	$0	$0	$0
Total Phase Element Cost	$75,352	$57,486	$75,352	$75,352	$57,486	$75,352
Escalation Factor	1.4636	1.4908	1.5180	1.5451	1.5723	1.5995
Escalated Phase Element Cost	$110,285	$85,700	$114,384	$116,426	$90,385	$120,526

Phase Element Cost Over Time Report
(without Markups)

Technology	2025	2026	2027	2028	2029	2030
Professional Labor Management	$0	$0	$0	$0	$0	$0
Access Roads	$0	$0	$0	$0	$0	$0
Capping	$0	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$0	$0	$0
Operations and Maintenance	$15,407	$63,049	$33,273	$15,407	$33,273	$15,407
Clear and Grub	$0	$0	$0	$0	$0	$0
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$0	$0	$0	$0	$0	$0
Total Phase Element Cost	$57,486	$105,128	$75,352	$57,486	$75,352	$57,486
Escalation Factor	1.6267	1.6538	1.6810	1.7082	1.7354	1.7625
Escalated Phase Element Cost	$93,512	$173,861	$126,667	$98,198	$130,766	$101,319

Phase Element Cost Over Time Report
(without Markups)

Technology	2031	2032	2033	2034	2035	2036
Professional Labor Management	$0	$0	$0	$0	$0	$0
Access Roads	$0	$0	$0	$0	$0	$0
Capping	$0	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$0	$0	$0
Operations and Maintenance	$33,273	$33,273	$15,407	$33,273	$15,407	$63,049
Clear and Grub	$0	$0	$0	$0	$0	$0
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$0	$0	$0	$0	$0	$0
Total Phase Element Cost	$75,352	$75,352	$57,486	$75,352	$57,486	$105,128
Escalation Factor	1.7897	1.8169	1.8440	1.8712	1.8984	1.9256
Escalated Phase Element Cost	$134,857	$136,907	$106,004	$140,999	$109,131	$202,434

Cost Database Date: 2001

Cost Type: User-Defined

Print Date: 3/17/2003 10:00:43 AM

Phase Element Cost Over Time Report
(without Markups)

Technology	2037	Total
Professional Labor Management	$0	$278,209
Access Roads	$0	$78,082
Capping	$0	$657,194
Fencing	$0	$18,089
Operations and Maintenance	$0	$849,305
Clear and Grub	$0	$55,616
Cleanup and Landscaping	$0	$18,508
Monitoring	$0	$864,000
Monitoring	$0	$70,110
Monitoring	$0	$328,260
Vadose Zone Monitoring System	$0	$158,922
Total Phase Element Cost	$0	$3,376,295
Escalation Factor	1.9527	
Escalated Phase Element Cost	$0	$4,699,273

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Phase Element Cost Over Time Report (without Markups)

Folder: MWL Corrective Measures Study Al

Project

Name: MWL Corrective Measures Study Alternatives
ID: MWL Corrective Measures Study Alternatives
Location: ALBUQUERQUE, NEW MEXICO
Modifiers: **Material** 0.935
Labor 1.031
Equipment 0.949
Category: None
Report Option: Fiscal Year

Site

Name: Containment Alternatives
ID: Containment Alternatives
Type: None

Phase Element

Name: MWL III.d - RCRA C Cap
Type: Remedial Action
Labor Rate Group: System Labor Rate
Analysis Rate Group: System Analysis Rate
Approach: Ex Situ
Start Date: 10/1/2006
Media/Waste Type: N/A
Secondary Media/Waste Type: N/A
Contaminant: None
Secondary Contaminant: None
Markup Template: System Defaults
O&M Markup Template: System Defaults
Description: Under this alternative, a RCRA Subtitle C cap would be deployed on the existing operational cover. The primary function of a RCRA Subtitle C cap is to limit water infiltration into waste disposal cells in order to minimize creation of leachate that could migrate to groundwater. Estimated costs for groundwater, vadose zone, soil, vegetation, and air monitoring for 30 years are included. Estimated costs for seeding, mulching, grading, erosion control, signage, and fencing are also included.

Phase Element Cost Over Time Report
(without Markups)

Technology	2007	2008	2009	2010	2011	2012
Professional Labor Management	$313,870	$0	$0	$0	$0	$0
Access Roads	$78,082	$0	$0	$0	$0	$0
Capping	$945,399	$0	$0	$0	$0	$0
Fencing	$18,089	$0	$0	$0	$0	$0
Operations and Maintenance	$22,223	$40,563	$95,586	$40,563	$95,586	$95,586
Clear and Grub	$55,616	$0	$0	$0	$0	$0
Cleanup and Landscaping	$18,508	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$158,922	$0	$0	$0	$0	$0
Total Phase Element Cost	$1,652,788	$82,642	$137,665	$82,642	$137,665	$137,665
Escalation Factor	1.1421	1.1673	1.1930	1.2194	1.2463	1.2734
Escalated Phase Element Cost	$1,887,649	$96,468	$164,234	$100,774	$171,572	$175,303

Cost Database Date: 2001

Cost Type: User-Defined

Print Date: 3/17/2003 10:00:59 AM

Phase Element Cost Over Time Report
(without Markups)

Technology	2013	2014	2015	2016	2017	2018
Professional Labor Management	$0	$0	$0	$0	$0	$0
Access Roads	$0	$0	$0	$0	$0	$0
Capping	$0	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$0	$0	$0
Operations and Maintenance	$40,563	$95,586	$40,563	$187,289	$95,586	$40,563
Clear and Grub	$0	$0	$0	$0	$0	$0
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$0	$0	$0	$0	$0	$0
Total Phase Element Cost	$82,642	$137,665	$82,642	$229,368	$137,665	$82,642
Escalation Factor	1.3006	1.3278	1.3549	1.3821	1.4093	1.4365
Escalated Phase Element Cost	$107,484	$182,792	$111,972	$317,010	$194,011	$118,715

Phase Element Cost Over Time Report (without Markups)

Technology	2019	2020	2021	2022	2023	2024
Professional Labor Management	$0	$0	$0	$0	$0	$0
Access Roads	$0	$0	$0	$0	$0	$0
Capping	$0	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$0	$0	$0
Operations and Maintenance	$95,586	$40,563	$95,586	$95,586	$40,563	$95,586
Clear and Grub	$0	$0	$0	$0	$0	$0
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$0	$0	$0	$0	$0	$0
Total Phase Element Cost	$137,665	$82,642	$137,665	$137,665	$82,642	$137,665
Escalation Factor	1.4636	1.4908	1.5180	1.5451	1.5723	1.5995
Escalated Phase Element Cost	$201,486	$123,203	$208,975	$212,706	$129,938	$220,195

Phase Element Cost Over Time Report
(without Markups)

Technology	2025	2026	2027	2028	2029	2030
Professional Labor Management	$0	$0	$0	$0	$0	$0
Access Roads	$0	$0	$0	$0	$0	$0
Capping	$0	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$0	$0	$0
Operations and Maintenance	$40,563	$187,289	$95,586	$40,563	$95,586	$40,563
Clear and Grub	$0	$0	$0	$0	$0	$0
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$0	$0	$0	$0	$0	$0
Total Phase Element Cost	$82,642	$229,368	$137,665	$82,642	$137,665	$82,642
Escalation Factor	1.6267	1.6538	1.6810	1.7082	1.7354	1.7625
Escalated Phase Element Cost	$134,434	$379,329	$231,415	$141,169	$238,904	$145,657

Phase Element Cost Over Time Report
(without Markups)

Technology	2031	2032	2033	2034	2035	2036
Professional Labor Management	$0	$0	$0	$0	$0	$0
Access Roads	$0	$0	$0	$0	$0	$0
Capping	$0	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$0	$0	$0
Operations and Maintenance	$95,586	$95,586	$40,563	$95,586	$40,563	$187,289
Clear and Grub	$0	$0	$0	$0	$0	$0
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$0	$0	$0	$0	$0	$0
Total Phase Element Cost	$137,665	$137,665	$82,642	$137,665	$82,642	$229,368
Escalation Factor	1.7897	1.8169	1.8440	1.8712	1.8984	1.9256
Escalated Phase Element Cost	$246,379	$250,124	$152,392	$257,599	$156,888	$441,671

Phase Element Cost Over Time Report
(without Markups)

Technology	2037	Total
Professional Labor Management	$0	$313,870
Access Roads	$0	$78,082
Capping	$0	$945,399
Fencing	$0	$18,089
Operations and Maintenance	$0	$2,409,050
Clear and Grub	$0	$55,616
Cleanup and Landscaping	$0	$18,508
Monitoring	$0	$864,000
Monitoring	$0	$70,110
Monitoring	$0	$328,260
Vadose Zone Monitoring System	$0	$158,922
Total Phase Element Cost	$0	$5,259,906
Escalation Factor	1.9527	
Escalated Phase Element Cost	$0	$7,500,448

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Phase Element Cost Over Time Report (without Markups)

Folder: MWL Corrective Measures Study Al

Project

Name: MWL Corrective Measures Study Alternatives
ID: MWL Corrective Measures Study Alternatives
Location: ALBUQUERQUE, NEW MEXICO
Modifiers: **Material** 0.935
Labor 1.031
Equipment 0.949
Category: None
Report Option: Fiscal Year

Site

Name: Containment Alternatives
ID: Containment Alternatives
Type: None

Phase Element

Name: MWL III.e - RCRA C Cap w/ Biointrusion Barrier
Type: Remedial Action
Labor Rate Group: System Labor Rate
Analysis Rate Group: System Analysis Rate
Approach: Ex Situ
Start Date: 10/1/2006
Media/Waste Type: N/A
Secondary Media/Waste Type: N/A
Contaminant: None
Secondary Contaminant: None
Markup Template: System Defaults
O&M Markup Template: System Defaults
Description: Under this alternative, a bio-intrusion barrier composed of a layer of cobbles would be included in the RCRA Subtitle C cap. EPA recommends that a 3-ft cobble barrier be placed between the vegetation/soil layer and the drainage layer. Estimated costs for groundwater, vadose zone, soil, vegetation, and air monitoring for 30 years are included. Estimated costs for seeding, mulching, grading, erosion control, signage, and fencing are also included.

Phase Element Cost Over Time Report
(without Markups)

Technology	2007	2008	2009	2010	2011	2012
Professional Labor Management	$465,090	$0	$0	$0	$0	$0
Access Roads	$78,082	$0	$0	$0	$0	$0
Capping	$1,579,780	$0	$0	$0	$0	$0
Fencing	$18,089	$0	$0	$0	$0	$0
Operations and Maintenance	$34,530	$65,177	$157,121	$65,177	$157,121	$157,121
Clear and Grub	$55,616	$0	$0	$0	$0	$0
Cleanup and Landscaping	$18,508	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$158,922	$0	$0	$0	$0	$0
Total Phase Element Cost	$2,450,696	$107,256	$199,200	$107,256	$199,200	$199,200
Escalation Factor	1.1421	1.1673	1.1930	1.2194	1.2463	1.2734
Escalated Phase Element Cost	$2,798,940	$125,200	$237,646	$130,788	$248,263	$253,661

Phase Element Cost Over Time Report
(without Markups)

Technology	2013	2014	2015	2016	2017	2018
Professional Labor Management	$0	$0	$0	$0	$0	$0
Access Roads	$0	$0	$0	$0	$0	$0
Capping	$0	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$0	$0	$0
Operations and Maintenance	$65,177	$157,121	$65,177	$310,359	$157,121	$65,177
Clear and Grub	$0	$0	$0	$0	$0	$0
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$0	$0	$0	$0	$0	$0
Total Phase Element Cost	$107,256	$199,200	$107,256	$352,438	$199,200	$107,256
Escalation Factor	1.3006	1.3278	1.3549	1.3821	1.4093	1.4365
Escalated Phase Element Cost	$139,497	$264,498	$145,321	$487,105	$280,733	$154,073

Phase Element Cost Over Time Report (without Markups)

Technology	2019	2020	2021	2022	2023	2024
Professional Labor Management	$0	$0	$0	$0	$0	$0
Access Roads	$0	$0	$0	$0	$0	$0
Capping	$0	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$0	$0	$0
Operations and Maintenance	$157,121	$65,177	$157,121	$157,121	$65,177	$157,121
Clear and Grub	$0	$0	$0	$0	$0	$0
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$0	$0	$0	$0	$0	$0
Total Phase Element Cost	$199,200	$107,256	$199,200	$199,200	$107,256	$199,200
Escalation Factor	1.4636	1.4908	1.5180	1.5451	1.5723	1.5995
Escalated Phase Element Cost	$291,549	$159,897	$302,386	$307,784	$168,639	$318,620

Phase Element Cost Over Time Report
(without Markups)

Technology	2025	2026	2027	2028	2029	2030
Professional Labor Management	$0	$0	$0	$0	$0	$0
Access Roads	$0	$0	$0	$0	$0	$0
Capping	$0	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$0	$0	$0
Operations and Maintenance	$65,177	$310,359	$157,121	$65,177	$157,121	$65,177
Clear and Grub	$0	$0	$0	$0	$0	$0
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$0	$0	$0	$0	$0	$0
Total Phase Element Cost	$107,256	$352,438	$199,200	$107,256	$199,200	$107,256
Escalation Factor	1.6267	1.6538	1.6810	1.7082	1.7354	1.7625
Escalated Phase Element Cost	$174,473	$582,862	$334,855	$183,215	$345,692	$189,039

Phase Element Cost Over Time Report
(without Markups)

Technology	2031	2032	2033	2034	2035	2036
Professional Labor Management	$0	$0	$0	$0	$0	$0
Access Roads	$0	$0	$0	$0	$0	$0
Capping	$0	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$0	$0	$0
Operations and Maintenance	$157,121	$157,121	$65,177	$157,121	$65,177	$310,359
Clear and Grub	$0	$0	$0	$0	$0	$0
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$0	$0	$0	$0	$0	$0
Total Phase Element Cost	$199,200	$199,200	$107,256	$199,200	$107,256	$352,438
Escalation Factor	1.7897	1.8169	1.8440	1.8712	1.8984	1.9256
Escalated Phase Element Cost	$356,508	$361,926	$197,780	$372,743	$203,615	$678,655

Phase Element Cost Over Time Report
(without Markups)

Technology	2037	Total
Professional Labor Management	$0	$465,090
Access Roads	$0	$78,082
Capping	$0	$1,579,780
Fencing	$0	$18,089
Operations and Maintenance	$0	$3,947,425
Clear and Grub	$0	$55,616
Cleanup and Landscaping	$0	$18,508
Monitoring	$0	$864,000
Monitoring	$0	$70,110
Monitoring	$0	$328,260
Vadose Zone Monitoring System	$0	$158,922
Total Phase Element Cost	$0	$7,583,882
Escalation Factor	1.9527	
Escalated Phase Element Cost	$0	$10,795,963

Cost Database Date: 2001

Cost Type: User-Defined

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Phase Element Cost Over Time Report (without Markups)

Folder: MWL Corrective Measures Study Al

Project

Name: MWL Corrective Measures Study Alternatives
ID: MWL Corrective Measures Study Alternatives
Location: ALBUQUERQUE, NEW MEXICO
Modifiers: **Material** 0.935
Labor 1.031
Equipment 0.949
Category: None
Report Option: Fiscal Year

Site

Name: Excavation Alternatives - Option A
ID: Excavation Alternatives - Option A
Type: None

Phase Element

Name: MWL V.a - Complete Excavation w/ ARS
Type: Remedial Action
Labor Rate Group: System Labor Rate
Analysis Rate Group: System Analysis Rate
Approach: Ex Situ
Start Date: 10/1/2006
Media/Waste Type: N/A
Secondary Media/Waste Type: N/A
Contaminant: Low Level Radioactive
Secondary Contaminant: Metals
Markup Template: System Defaults
O&M Markup Template: System Defaults
Description: Under this alternative, the landfill would be excavated and the wastes would be placed in permanent, aboveground, retrievable storage. Secure, high bay warehouses for processing and storage of classified and unclassified waste would be built on-site, adjacent to the landfill to minimize handling and transportation logistics and cost. Costs for shielding, remote handling, and/or robotic equipment required for excavation of the classified area are included.

Phase Element Cost Over Time Report
(without Markups)

Technology	2007	2008	Total
Cleanup and Landscaping	$18,508	$0	$18,508
Decontamination Facilities	$710,373	$0	$710,373
Operations and Maintenance	$0	$0	$0
Excavation	$269,891,456	$0	$269,891,456
Fencing	$18,089	$0	$18,089
Drum Removal	$156,479	$0	$156,479
Professional Labor Management	$12,847,539	$0	$12,847,539
Transportation	$61,201,228	$0	$61,201,228
Excavation	$75,160,280	$0	$75,160,280
Clear and Grub	$55,616	$0	$55,616
Total Phase Element Cost	$420,059,568	$0	$420,059,568
Escalation Factor	1.1421	1.1673	
Escalated Phase Element Cost	$479,750,033	$0	$479,750,033

Cost Database Date: 2001

Cost Type: User-Defined

Print Date: 3/17/2003 11:14:34 AM

Phase Element Cost Over Time Report (without Markups)

Folder: MWL Corrective Measures Study Al

Project

Name: MWL Corrective Measures Study Alternatives
ID: MWL Corrective Measures Study Alternatives
Location: ALBUQUERQUE, NEW MEXICO
Modifiers: **Material** 0.935
Labor 1.031
Equipment 0.949
Category: None
Report Option: Fiscal Year

Site

Name: Excavation Alternatives - Option B
ID: Excavation Alternatives - Option B
Type: None

Phase Element

Name: MWL V.a - Complete Excavation w/ ARS
Type: Remedial Action
Labor Rate Group: System Labor Rate
Analysis Rate Group: System Analysis Rate
Approach: Ex Situ
Start Date: 10/1/2006
Media/Waste Type: N/A
Secondary Media/Waste Type: N/A
Contaminant: Low Level Radioactive
Secondary Contaminant: Metals
Markup Template: System Defaults
O&M Markup Template: System Defaults
Description: Under this alternative, the landfill would be excavated and the wastes would be placed in permanent, aboveground, retrievable storage. Secure, high bay warehouses for processing and storage of classified and unclassified waste would be built on-site, adjacent to the landfill to minimize handling and transportation logistics and cost. Costs for shielding, remote handling, and/or robotic equipment required for excavation of the classified area are included. All soils, including contaminated soils, will be placed in the excavation as backfill.

Phase Element Cost Over Time Report
(without Markups)

Technology	2007	2008	Total
Cleanup and Landscaping	$18,508	$0	$18,508
Decontamination Facilities	$710,373	$0	$710,373
Operations and Maintenance	$0	$0	$0
Fencing	$18,089	$0	$18,089
Professional Labor Management	$11,230,708	$0	$11,230,708
Drum Removal	$156,479	$0	$156,479
Transportation	$10,421,699	$0	$10,421,699
Excavation	$269,573,792	$0	$269,573,792
Excavation	$75,010,848	$0	$75,010,848
Clear and Grub	$55,616	$0	$55,616
Total Phase Element Cost	$367,196,112	$0	$367,196,112
Escalation Factor	1.1421	1.1673	
Escalated Phase Element Cost	$419,374,680	$0	$419,374,680

Cost Database Date: 2001

Cost Type: User-Defined

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Phase Element Cost Over Time Report (without Markups)

Folder: MWL Corrective Measures Study Al

Project

Name: MWL Corrective Measures Study Alternatives
ID: MWL Corrective Measures Study Alternatives
Location: ALBUQUERQUE, NEW MEXICO
Modifiers: **Material** 0.935
Labor 1.031
Equipment 0.949
Category: None
Report Option: Fiscal Year

Site

Name: Excavation Alternatives - Option A
ID: Excavation Alternatives - Option A
Type: None

Phase Element

Name: MWL V.b - Complete Excavation With Offsite Disp.
Type: Remedial Action
Labor Rate Group: System Labor Rate
Analysis Rate Group: System Analysis Rate
Approach: Ex Situ
Start Date: 10/1/2006
Media/Waste Type: N/A
Secondary Media/Waste Type: N/A
Contaminant: Low Level Radioactive
Secondary Contaminant: Metals
Markup Template: System Defaults
O&M Markup Template: N/A
Description: Under this alternative, the landfill would be excavated and the wastes would be shipped to offsite, licensed facilities for disposal. Secure, high bay warehouses for processing and temporary storage of classified and unclassified waste would be built on-site, adjacent to the landfill to minimize handling and transportation logistics and costs. Costs for shielding, remote handling and/or robotic equipment required for excavation of the classified area are included.

Phase Element Cost Over Time Report
(without Markups)

Technology	2007	Total
Professional Labor Management	$19,980,164	$19,980,164
Fencing	$18,089	$18,089
Off-site Transportation and Landfill Disposal	$280,359,424	$280,359,424
Operations and Maintenance	$0	$0
Drum Removal	$156,479	$156,479
Cleanup and Landscaping	$18,508	$18,508
Decontamination Facilities	$710,373	$710,373
Excavation	$276,806,944	$276,806,944
Excavation	$75,160,280	$75,160,280
Clear and Grub	$55,616	$55,616
Total Phase Element Cost	$653,265,877	$653,265,877
Escalation Factor	1.1421	
Escalated Phase Element Cost	$746,094,958	$746,094,958

Cost Database Date: 2001

Cost Type: User-Defined

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Phase Element Cost Over Time Report (without Markups)

Folder: MWL Corrective Measures Study Al

Project

Name: MWL Corrective Measures Study Alternatives
ID: MWL Corrective Measures Study Alternatives
Location: ALBUQUERQUE, NEW MEXICO
Modifiers: **Material** 0.935
Labor 1.031
Equipment 0.949
Category: None
Report Option: Fiscal Year

Site

Name: Excavation Alternatives - Option B
ID: Excavation Alternatives - Option B
Type: None

Phase Element

Name: MWL V.b - Complete Excavation With Offsite Disp.
Type: Remedial Action
Labor Rate Group: System Labor Rate
Analysis Rate Group: System Analysis Rate
Approach: Ex Situ
Start Date: 10/1/2006
Media/Waste Type: N/A
Secondary Media/Waste Type: N/A
Contaminant: Low Level Radioactive
Secondary Contaminant: Metals
Markup Template: System Defaults
O&M Markup Template: N/A
Description: Under this alternative, the landfill would be excavated and the wastes would be shipped to offsite, licensed facilities for disposal. Secure, high bay warehouses for processing and temporary storage of classified and unclassified waste would be built on-site, adjacent to the landfill to minimize handling and transportation logistics and costs. Costs for shielding, remote handling and/or robotic equipment required for excavation of the classified area are included. Under Option B, all soils (including contaminated soils) will be returned to the excavation as backfill.

Phase Element Cost Over Time Report
(without Markups)

Technology	2007	Total
Professional Labor Management	$16,218,871	$16,218,871
Fencing	$18,089	$18,089
Off-site Transportation and Landfill Disposal	$168,525,120	$168,525,120
Operations and Maintenance	$0	$0
Drum Removal	$156,479	$156,479
Cleanup and Landscaping	$18,508	$18,508
Decontamination Facilities	$710,373	$710,373
Excavation	$269,573,760	$269,573,760
Excavation	$75,010,848	$75,010,848
Clear and Grub	$55,616	$55,616
Total Phase Element Cost	$530,287,664	$530,287,664
Escalation Factor	1.1421	
Escalated Phase Element Cost	$605,641,541	$605,641,541

Phase Element Cost Over Time Report (without Markups)

Folder: MWL Corrective Measures Study Al

Project

Name: MWL Corrective Measures Study Alternatives
ID: MWL Corrective Measures Study Alternatives
Location: ALBUQUERQUE, NEW MEXICO
Modifiers: **Material** 0.935
Labor 1.031
Equipment 0.949
Category: None
Report Option: Fiscal Year

Site

Name: Excavation Alternatives - Option A
ID: Excavation Alternatives - Option A
Type: None

Phase Element

Name: MWL V.c - Partial Excavation w/ ARS
Type: Remedial Action
Labor Rate Group: System Labor Rate
Analysis Rate Group: System Analysis Rate
Approach: Ex Situ
Start Date: 10/1/2006
Media/Waste Type: N/A
Secondary Media/Waste Type: N/A
Contaminant: Low Level Radioactive
Secondary Contaminant: Metals
Markup Template: System Defaults
O&M Markup Template: N/A
Description: Under this alternative, the classified area of the landfill would be excavated and the wastes would be placed in permanent, aboveground retrievable storage. Secure, high bay warehouses for processing and storage of classified waste would be built on-site, adjacent to the landfill to minimize handling and transportation logistics and cost. Costs for shielding, remote-handling and/or robotic equipment required for excavation of the classified area are included.

Phase Element Cost Over Time Report
(without Markups)

Technology	2007	Total
Drum Removal	$99,760	$99,760
Professional Labor Management	$2,997,271	$2,997,271
Operations and Maintenance	$0	$0
Fencing	$18,089	$18,089
Cleanup and Landscaping	$18,508	$18,508
Decontamination Facilities	$710,373	$710,373
Excavation	$75,160,280	$75,160,280
Transportation	$18,938,030	$18,938,030
Clear and Grub	$55,616	$55,616
Total Phase Element Cost	$97,997,927	$97,997,927
Escalation Factor	1.1421	
Escalated Phase Element Cost	$111,923,432	$111,923,432

Phase Element Cost Over Time Report (without Markups)

Folder: MWL Corrective Measures Study Al

Project

Name: MWL Corrective Measures Study Alternatives
ID: MWL Corrective Measures Study Alternatives
Location: ALBUQUERQUE, NEW MEXICO
Modifiers: **Material** 0.935
Labor 1.031
Equipment 0.949
Category: None
Report Option: Fiscal Year

Site

Name: Excavation Alternatives - Option B
ID: Excavation Alternatives - Option B
Type: None

Phase Element

Name: MWL V.c - Partial Excavation w/ ARS
Type: Remedial Action
Labor Rate Group: System Labor Rate
Analysis Rate Group: System Analysis Rate
Approach: Ex Situ
Start Date: 10/1/2006
Media/Waste Type: N/A
Secondary Media/Waste Type: N/A
Contaminant: Low Level Radioactive
Secondary Contaminant: Metals
Markup Template: System Defaults
O&M Markup Template: N/A
Description: Under this alternative, the classified area of the landfill would be excavated and the wastes would be placed in permanent, aboveground retrievable storage. Secure, high bay warehouses for processing and storage of classified waste would be built on-site, adjacent to the landfill to minimize handling and transportation logistics and cost. Costs for shielding, remote-handling and/or robotic equipment required for excavation of the classified area are included. Under Option B, all soils (including contaminated soils) will be returned to the excavation as backfill.

Phase Element Cost Over Time Report
(without Markups)

Technology	2007	Total
Drum Removal	$99,760	$99,760
Professional Labor Management	$2,431,834	$2,431,834
Operations and Maintenance	$0	$0
Fencing	$18,089	$18,089
Cleanup and Landscaping	$18,508	$18,508
Decontamination Facilities	$710,373	$710,373
Transportation	$1,165,554	$1,165,554
Excavation	$75,010,848	$75,010,848
Clear and Grub	$55,616	$55,616
Total Phase Element Cost	$79,510,582	$79,510,582
Escalation Factor	1.1421	
Escalated Phase Element Cost	$90,809,036	$90,809,036

Cost Database Date: 2001

Cost Type: User-Defined

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Phase Element Cost Over Time Report (without Markups)

Folder: MWL Corrective Measures Study Al

Project

Name: MWL Corrective Measures Study Alternatives
ID: MWL Corrective Measures Study Alternatives
Location: ALBUQUERQUE, NEW MEXICO
Modifiers: **Material** 0.935
Labor 1.031
Equipment 0.949
Category: None
Report Option: Fiscal Year

Site

Name: Excavation Alternatives - Option A
ID: Excavation Alternatives - Option A
Type: None

Phase Element

Name: MWL V.d - Partial Excavation With Offsite Disp.
Type: Remedial Action
Labor Rate Group: System Labor Rate
Analysis Rate Group: System Analysis Rate
Approach: Ex Situ
Start Date: 10/1/2006
Media/Waste Type: N/A
Secondary Media/Waste Type: N/A
Contaminant: Low Level Radioactive
Secondary Contaminant: Metals
Markup Template: System Defaults
O&M Markup Template: N/A
Description: Under this alternative, the classifed area of the landfill would be excavated and the wastes would be shipped to offsite, licensed facilities for disposal. Secure, high bay warehouses for processing and temporary storage of classified waste would be built on-site, adjacent to the landfill to minimize handling and transportation logicstics and costs. Costs for shielding, remote handling and/or robotic equipment required for excavation of the classied area are included.

Phase Element Cost Over Time Report (without Markups)

Technology	2007	Total
Professional Labor Management	$4,235,398	$4,235,398
Fencing	$18,089	$18,089
Cleanup and Landscaping	$18,508	$18,508
Drum Removal	$99,760	$99,760
Decontamination Facilities	$710,373	$710,373
Excavation	$75,160,280	$75,160,280
Off-site Transportation and Landfill Disposal	$58,181,364	$58,181,364
Clear and Grub	$55,616	$55,616
Total Phase Element Cost	$138,479,388	$138,479,388
Escalation Factor	1.1421	
Escalated Phase Element Cost	$158,157,309	$158,157,309

Cost Database Date: 2001

Cost Type: User-Defined

Print Date: 3/17/2003 10:05:22 AM

Phase Element Cost Over Time Report (without Markups)

Folder: MWL Corrective Measures Study AI

Project

Name: MWL Corrective Measures Study Alternatives
ID: MWL Corrective Measures Study Alternatives
Location: ALBUQUERQUE, NEW MEXICO
Modifiers: **Material** 0.935
Labor 1.031
Equipment 0.949
Category: None
Report Option: Fiscal Year

Site

Name: Excavation Alternatives - Option B
ID: Excavation Alternatives - Option B
Type: None

Phase Element

Name: MWL V.d - Partial Excavation With Offsite Disp.
Type: Remedial Action
Labor Rate Group: System Labor Rate
Analysis Rate Group: System Analysis Rate
Approach: Ex Situ
Start Date: 10/1/2006
Media/Waste Type: N/A
Secondary Media/Waste Type: N/A
Contaminant: Low Level Radioactive
Secondary Contaminant: Metals
Markup Template: System Defaults
O&M Markup Template: N/A
Description: Under this alternative, the classifed area of the landfill would be excavated and the wastes would be shipped to offsite, licensed facilities for disposal. Secure, high bay warehouses for processing and temporary storage of classified waste would be built on-site, adjacent to the landfill to minimize handling and transportation logicstics and costs. Costs for shielding, remote handling and/or robotic equipment required for excavation of the classied area are included. Under Option B, all soils (included contaminated soils) are returned to the excavation as backfill.

Phase Element Cost Over Time Report
(without Markups)

Technology	2007	Total
Professional Labor Management	$2,989,897	$2,989,897
Fencing	$18,089	$18,089
Cleanup and Landscaping	$18,508	$18,508
Drum Removal	$99,760	$99,760
Decontamination Facilities	$710,373	$710,373
Off-site Transportation and Landfill Disposal	$18,853,756	$18,853,756
Excavation	$75,010,848	$75,010,848
Clear and Grub	$55,616	$55,616
Total Phase Element Cost	$97,756,847	$97,756,847
Escalation Factor	1.1421	
Escalated Phase Element Cost	$111,648,095	$111,648,095

Cost Database Date: 2001

Cost Type: User-Defined

Print Date: 3/17/2003 10:05:42 AM

Phase Element Cost Over Time Report (without Markups)

Folder: MWL Corrective Measures Study Al

Project

Name: MWL Corrective Measures Study Alternatives
ID: MWL Corrective Measures Study Alternatives
Location: ALBUQUERQUE, NEW MEXICO
Modifiers: **Material** 0.935
Labor 1.031
Equipment 0.949
Category: None
Report Option: Fiscal Year

Site

Name: Excavation Alternatives - Option A
ID: Excavation Alternatives - Option A
Type: None

Phase Element

Name: MWL V.e - Future Excavation
Type: Remedial Action
Labor Rate Group: System Labor Rate
Analysis Rate Group: System Analysis Rate
Approach: Ex Situ
Start Date: 10/1/2039
Media/Waste Type: N/A
Secondary Media/Waste Type: N/A
Contaminant: Low Level Radioactive
Secondary Contaminant: Metals
Markup Template: System Defaults
O&M Markup Template: N/A

Description: Under this alternative, the landfill would be excavated 50 years after landfill closure. Secure, high bay warehouses for processing and temporary storage of classified and unclassified waste would be built on-site, adjacent to the landfill to minimize handling and transportation logistics and costs. Costs for shielding, remote handling and/or robotic equipment required for excavation are not included. It is assumed that remote handling and robotics will not be required during future excavation. Because tritium activities will have decayed to background ranges, all soils will be returned to the excavation as backfill. Estimated costs for groundwater, vadose zone, soil, vegetation, and air monitoring in the interim period until excavation are included. Estimated costs for seeding, mulching, grading, erosion control, signage, and fencing are also included.

Phase Element Cost Over Time Report
(without Markups)

Technology	2007	2008	2009	2010	2011	2012
Drum Removal	$0	$0	$0	$0	$0	$0
Professional Labor Management	$0	$0	$0	$0	$0	$0
Operations and Maintenance	$0	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$0	$0	$0
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Decontamination Facilities	$0	$0	$0	$0	$0	$0
Transportation	$0	$0	$0	$0	$0	$0
Excavation	$0	$0	$0	$0	$0	$0
Excavation	$0	$0	$0	$0	$0	$0
Clear and Grub	$0	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$0	$0	$0	$0	$0	$0
Monitoring	$0	$0	$0	$0	$0	$0
Monitoring	$0	$0	$0	$0	$0	$0
Monitoring	$0	$0	$0	$0	$0	$0

Phase Element Cost Over Time Report
(without Markups)

Technology	2013	2014	2015	2016	2017	2018
Total Phase Element Cost	$42,079	$42,079	$42,079	$42,079	$42,079	$42,079
Escalation Factor	1.1421	1.1673	1.1930	1.2194	1.2463	1.2734
Escalated Phase Element Cost	$48,058	$49,119	$50,200	$51,311	$52,443	$53,583

Phase Element Cost Over Time Report
(without Markups)

Technology	2013	2014	2015	2016	2017	2018
Drum Removal	$0	$0	$0	$0	$0	$0
Professional Labor Management	$0	$0	$0	$0	$0	$0
Operations and Maintenance	$0	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$0	$0	$0
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Decontamination Facilities	$0	$0	$0	$0	$0	$0
Transportation	$0	$0	$0	$0	$0	$0
Excavation	$0	$0	$0	$0	$0	$0
Excavation	$0	$0	$0	$0	$0	$0
Clear and Grub	$0	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$0	$0	$0	$0	$0	$0
Monitoring	$0	$0	$0	$0	$0	$0
Monitoring	$0	$0	$0	$0	$0	$0
Monitoring	$0	$0	$0	$0	$0	$0

Phase Element Cost Over Time Report
(without Markups)

Technology	2013	2014	2015	2016	2017	2018
Total Phase Element Cost	$42,079	$42,079	$42,079	$42,079	$42,079	$42,079
Escalation Factor	1.3006	1.3278	1.3549	1.3821	1.4093	1.4365
Escalated Phase Element Cost	$54,728	$55,872	$57,013	$58,157	$59,302	$60,446

Phase Element Cost Over Time Report
(without Markups)

Technology	2019	2020	2021	2022	2023	2024
Drum Removal	$0	$0	$0	$0	$0	$0
Professional Labor Management	$0	$0	$0	$0	$0	$0
Operations and Maintenance	$0	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$0	$0	$0
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Decontamination Facilities	$0	$0	$0	$0	$0	$0
Transportation	$0	$0	$0	$0	$0	$0
Excavation	$0	$0	$0	$0	$0	$0
Excavation	$0	$0	$0	$0	$0	$0
Clear and Grub	$0	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$0	$0	$0	$0	$0	$0
Monitoring	$0	$0	$0	$0	$0	$0
Monitoring	$0	$0	$0	$0	$0	$0
Monitoring	$0	$0	$0	$0	$0	$0

Phase Element Cost Over Time Report
(without Markups)

Technology	2019	2020	2021	2022	2023	2024
Total Phase Element Cost	$42,079	$42,079	$42,079	$42,079	$42,079	$42,079
Escalation Factor	1.4636	1.4908	1.5180	1.5451	1.5723	1.5995
Escalated Phase Element Cost	$61,587	$62,731	$63,876	$65,016	$66,161	$67,305

Phase Element Cost Over Time Report
(without Markups)

Technology	2025	2026	2027	2028	2029	2030
Drum Removal	$0	$0	$0	$0	$0	$0
Professional Labor Management	$0	$0	$0	$0	$0	$0
Operations and Maintenance	$0	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$0	$0	$0
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Decontamination Facilities	$0	$0	$0	$0	$0	$0
Transportation	$0	$0	$0	$0	$0	$0
Excavation	$0	$0	$0	$0	$0	$0
Excavation	$0	$0	$0	$0	$0	$0
Clear and Grub	$0	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$0	$0	$0	$0	$0	$0
Monitoring	$0	$0	$0	$0	$0	$0
Monitoring	$0	$0	$0	$0	$0	$0
Monitoring	$0	$0	$0	$0	$0	$0

Phase Element Cost Over Time Report
(without Markups)

Technology	2025	2026	2027	2028	2029	2030
Total Phase Element Cost	$42,079	$42,079	$42,079	$42,079	$42,079	$42,079
Escalation Factor	1.6267	1.6538	1.6810	1.7082	1.7354	1.7625
Escalated Phase Element Cost	$68,450	$69,590	$70,735	$71,879	$73,024	$74,164

Phase Element Cost Over Time Report
(without Markups)

Technology	2031	2032	2033	2034	2035	2036
Drum Removal	$0	$0	$0	$0	$0	$0
Professional Labor Management	$0	$0	$0	$0	$0	$0
Operations and Maintenance	$0	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$0	$0	$0
Cleanup and Landscaping	$0	$0	$0	$0	$0	$0
Decontamination Facilities	$0	$0	$0	$0	$0	$0
Transportation	$0	$0	$0	$0	$0	$0
Excavation	$0	$0	$0	$0	$0	$0
Excavation	$0	$0	$0	$0	$0	$0
Clear and Grub	$0	$0	$0	$0	$0	$0
Monitoring	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800
Monitoring	$2,337	$2,337	$2,337	$2,337	$2,337	$2,337
Monitoring	$10,942	$10,942	$10,942	$10,942	$10,942	$10,942
Vadose Zone Monitoring System	$0	$0	$0	$0	$0	$0
Monitoring	$0	$0	$0	$0	$0	$0
Monitoring	$0	$0	$0	$0	$0	$0
Monitoring	$0	$0	$0	$0	$0	$0

Phase Element Cost Over Time Report
(without Markups)

Technology	2031	2032	2033	2034	2035	2036
Total Phase Element Cost	$42,079	$42,079	$42,079	$42,079	$42,079	$42,079
Escalation Factor	1.7897	1.8169	1.8440	1.8712	1.8984	1.9256
Escalated Phase Element Cost	$75,309	$76,453	$77,594	$78,738	$79,883	$81,027

Phase Element Cost Over Time Report
(without Markups)

Technology	2037	2038	2039	2040	Total
Drum Removal	$0	$0	$0	$156,479	$156,479
Professional Labor Management	$0	$0	$0	$1,440,753	$1,440,753
Operations and Maintenance	$0	$0	$0	$0	$0
Fencing	$0	$0	$0	$18,089	$18,089
Cleanup and Landscaping	$0	$0	$0	$18,508	$18,508
Decontamination Facilities	$0	$0	$0	$710,373	$710,373
Transportation	$0	$0	$0	$10,421,699	$10,421,699
Excavation	$0	$0	$0	$5,947,051	$5,947,051
Excavation	$0	$0	$0	$28,094,792	$28,094,792
Clear and Grub	$0	$0	$0	$55,616	$55,616
Monitoring	$0	$0	$0	$0	$864,000
Monitoring	$0	$0	$0	$0	$70,110
Monitoring	$0	$0	$0	$0	$328,260
Vadose Zone Monitoring System	$0	$0	$0	$158,922	$158,922
Monitoring	$28,800	$28,800	$28,800	$28,800	$115,200
Monitoring	$2,337	$2,337	$2,337	$2,337	$9,348
Monitoring	$10,942	$10,942	$10,942	$10,942	$43,768

Phase Element Cost Over Time Report
(without Markups)

Technology	2037	2038	2039	2040	Total
Total Phase Element Cost	$42,079	$42,079	$42,079	$47,064,361	$48,452,968
Escalation Factor	1.9527	1.9799	2.0071	2.0342	
Escalated Phase Element Cost	$82,168	$83,312	$84,457	$95,738,323	$97,922,014

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