

**Table 6-7a**  
**Construction Cost Estimate for Soil Alternative No. 4a**  
Rolling Knolls Landfill Superfund Site - Feasibility Study  
Chatham, New Jersey

Geosyntec Consultants

Component	Range Unit Cost			Unit	Quantity	Construction Cost Estimate	
A - Design/Construction Oversight/Permits							
2-ft Excavation of Selected Area							
Pre-Design Investigation	0.5%	to	1%	% Construction <sup>(2)</sup>	\$ 30,522,500	\$	229,000
Remedial Design	0.5%	to	1%	% Construction <sup>(2)</sup>	\$ 30,522,500	\$	229,000
Remedial Oversight	5%	to	10%	% Construction <sup>(2)</sup>	\$ 30,522,500	\$	2,289,200
4-ft Excavation of Selected Area							
Pre-Design Investigation	0.5%	to	1%	% Construction <sup>(2)</sup>	\$ 53,885,100	\$	404,200
Remedial Design	0.5%	to	1%	% Construction <sup>(2)</sup>	\$ 53,885,100	\$	404,200
Remedial Oversight	5%	to	10%	% Construction <sup>(2)</sup>	\$ 53,885,100	\$	4,041,400
Subtotal (Option 1: 2-ft Excavation of Selected Area)						\$	2,747,200
Subtotal (Option 2: 4-ft Excavation of Selected Area)						\$	4,849,800
B - Construction Preparation							
2-ft Excavation of Selected Area							
Bonding, insurance, etc.	0.05%	to	0.10%	% Construction <sup>(2)</sup>	\$ 30,522,500	\$	22,900
Mobilization/Demobilization	0.25%	to	0.75%	% Construction <sup>(2)</sup>	\$ 30,522,500	\$	152,700
4-ft Excavation of Selected Area							
Bonding, insurance etc.	0.05%	to	0.10%	% Construction <sup>(2)</sup>	\$ 53,885,100	\$	40,500
Mobilization/Demobilization	0.25%	to	0.75%	% Construction <sup>(2)</sup>	\$ 53,885,100	\$	269,500
Subtotal (Option 1: 2-ft Excavation of Selected Area)						\$	175,600
Subtotal (Option 2: 4-ft Excavation of Selected Area)						\$	310,000
C - General Construction and Site Management							
Site management and facilities	\$ 5,400	to	\$ 21,600	per mth	24	\$	324,000
Survey (topo , wetlands, etc.)	\$ 80,800	to	\$ 107,700	est.	1	\$	94,300
Britten Road entrance overlay	\$ 6	to	\$ 7	sft	35,000	\$	227,500
Construction entrance	\$ 5,400	to	\$ 10,800	est.	1	\$	8,100
Traffic management	\$ 2,200	to	\$ 10,800	mth	20	\$	130,000
Demolition existing structures and place in LF	\$ 10,800	to	\$ 27,000	est.	1	\$	18,900
25-ft wide construction access road	\$ 110	to	\$ 220	lin ft	5,600	\$	924,000
15-ft wide permanent access road (half of perimeter)	\$ 65	to	\$ 130	lin ft	5,600	\$	546,000
Structural BMP (bog turtle)	\$ 21,600	to	\$ 43,100	est.	1	\$	32,400
Subtotal						\$	2,305,200

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<b>D - Areas of Particular Concern (APCs)</b>					
APCs include POI-09, POI-14, SS-109 (i.e., TP-09), SS-90, SS-97, SS-103, and SS-118.					
Assumed 1-acre remediation for each APC.					
Remediation area:	7.0	acres			
Flood hazard area (FHA):	3.0	acres			
Surface Debris Area :	2.0	acres			
Wetland impact area:	4.8	acres			
Remediation area perimeter:	5,200	feet			
including APCs POI-9, POI-14, and SS-118					
including APCs POI-9 and POI-14					
includes all APCs.					
<b>Site Preparation</b>					
Silt fence (perimeter of each APC)		\$ 6	lin ft	6,240	\$ 37,500
Turbidity curtain		\$ 11	lin ft	5,200	\$ 57,200
Clearing/grubbing		\$ 2,200	acre	8.4	\$ 18,500
Relocation of surface debris using LGP equipment		\$ 11	cyd	3,300	\$ 36,300
<b>Cap In-Place</b>					
Excavate/relocate 3-ft soil in FHA		\$ 22	cyd	14,600	\$ 321,200
Subtitle D cap (see Table 6-4 for details)		\$ 234,000	acre	6	\$ 1,404,000
Stormwater basin (one basin per each APC)	\$ 21,600 to	\$ 43,100	est.	6	\$ 194,100
Perimeter anchor trench		\$ 3	lin ft	2,250	\$ 6,800
Landform plus enhanced AT		\$ 70	lin ft	2,250	\$ 157,500
Passive LFG control (vents or vents & trenches)	\$ 4,400 to	\$ 6,500	acre	6	\$ 32,700
Wetland 1:1 on-Site reconstruction		\$ 161,600	acre	2.0	\$ 323,200
Wetland restoration (re-vegetation)		\$ 3,300	acre	1.2	\$ 4,000
<b>Excavate and Dispose Offsite (SS-109/TP-09)</b>					
Excavate 2-ft thick impacted soil		\$ 22	cyd	3,300	\$ 72,600
Off-site transportation	\$ 6 to	\$ 11	ton	3,300	\$ 28,100
Off-site disposal (hazardous waste)	\$ 220 to	\$ 540	ton	1,650	\$ 627,000
Off-site disposal (non-hazardous waste)	\$ 44 to	\$ 76	ton	1,650	\$ 99,000
Backfill with offsite soil (e.g., loam)		\$ 44	cyd	3,300	\$ 145,200
Wetland 1:1 on-Site reconstruction		\$ 161,600	acre	1.0	\$ 161,600
Wetland restoration (re-vegetation)		\$ 3,300	acre	0.6	\$ 2,000
<b>Subtotal</b>					<b>\$ 3,728,500</b>

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<b>E - 25-Acre Selected Area (Functional Area 1)</b>					
Remediation area:	25	acres			
Flood hazard area (FHA):	0	acres			
Wetland impact area:	4	acres			
Remediation area perimeter:	6,100	feet			
<b>Site Preparation</b>					
Silt fence		\$ 6	lin ft	7,320	\$ 44,000
Turbidity curtain		\$ 11	lin ft	1,525	\$ 16,800
Clearing/grubbing		\$ 2,200	acre	30	\$ 66,000
<b>2-ft Excavate and Dispose Offsite</b>					
2-ft excavation		\$ 17	cyd	80,700	\$ 1,371,900
Off-site transportation	\$ 6 to	\$ 11	ton	80,700	\$ 686,000
Off-site disposal (hazardous waste)	\$ 220 to	\$ 540	ton	40,350	\$ 15,333,000
Off-site disposal (non-hazardous waste)	\$ 44 to	\$ 76	ton	40,350	\$ 2,421,000
Backfill with off-site soil		\$ 44	cyd	80,700	\$ 3,550,800
<b>4-ft Excavate and Dispose Offsite</b>					
4-ft excavation		\$ 17	cyd	161,400	\$ 2,743,800
Off-site transportation	\$ 6 to	\$ 11	ton	161,400	\$ 1,371,900
Off-site disposal (hazardous waste)	\$ 220 to	\$ 540	ton	80,700	\$ 30,666,000
Off-site disposal (non-hazardous waste)	\$ 44 to	\$ 76	ton	80,700	\$ 4,842,000
Backfill with off-site soil		\$ 44	cyd	161,400	\$ 7,101,600
Wetland 1:1 on-Site reconstruction		\$ 161,600	acre	4.0	\$ 646,400
Wetland restoration (re-vegetation)		\$ 3,300	acre	1	\$ 3,300
<b>Subtotal (Option 1: 2-ft Excavation of Selected Area)</b>					\$ 24,139,200
<b>Subtotal (Option 2: 4-ft Excavation of Selected Area)</b>					\$ 47,501,800
<b>F - Vegetation of Non-Vegetated Areas</b>					
<b>Outside of FHA</b>					
Scarify, fertilize, and hydroseed	2	acres			
		\$ 3,600	acre	1	\$ 3,600
2-ft soil (veg. support + topsoil), and hydroseed		\$ 120,000	acre	1	\$ 120,000
<b>Subtotal</b>					\$ 123,600

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<b>G - Site Controls (physical)</b>					
7-ft high perimeter fence		\$ 33	lin ft	6,500	\$ 214,500
20-ft wide double access gates		\$ 4,400	each	2	\$ 8,800
3-ft wide man gates		\$ 870	each	3	\$ 2,700
<b>Subtotal</b>					<b>\$ 226,000</b>
<b>H - Site Controls (administrative)</b>					
Institutional controls		\$ 10,800	est.	1	\$ 10,800
Reporting to EPA		\$ 4,400	every 5-yrs	6	\$ 26,400
Reporting to NJ		\$ 4,400	every 2-yrs	15	\$ 66,000
<b>Subtotal</b>					<b>\$ 103,200</b>
<b>I - Post-Remedy Operation &amp; Maintenance</b>					
Maintenance of Vegetation Areas (Item F)	\$ 1,300 to \$ 3,800		annual	30	\$ 112,000
Landfill monitoring/maintenance	\$ 21,600 to \$ 53,900		annual	30	\$ 1,657,400
Fence O&M	\$ 2,300 to \$ 6,800		annual	30	\$ 199,800
Wetland mitigation monitoring/maintenance	\$ 40,400 to \$ 53,900		annual	5	\$ 247,900
<b>Subtotal</b>					<b>\$ 2,217,100</b>
<b>Total (Option 1 - 2-ft Excavation of Selected Area)</b>					<b>\$ 35,766,000</b>
<b>Total (Option 2 - 4-ft Excavation of Selected Area)</b>					<b>\$ 61,366,000</b>

Notes:

- (1) See Table 6-4 for cost estimate assumptions, notes, and limitations.
- (2) Construction cost to estimate these items include the costs of Items C through G.