

Table 6-6b
Construction Cost Estimate for Soil Alternative No. 3b
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									
Pre-Design Investigation	3%	to	4%	% Construction ⁽²⁾	\$	14,407,600	\$	504,300	
Remedial Design	3%	to	6%	% Construction ⁽²⁾	\$	14,407,600	\$	648,400	
Remedial Oversight	5%	to	10%	% Construction ⁽²⁾	\$	14,407,600	\$	1,080,600	
Subtotal							\$	2,233,300	
B - Construction Preparation									
Bonding, insurance etc.	0.10%	to	0.15%	% Construction ⁽²⁾	\$	14,407,600	\$	18,100	
Mobilization/Demobilization	1%	to	2%	% Construction ⁽²⁾	\$	14,407,600	\$	216,200	
Subtotal							\$	234,300	
C - General Construction and Site Management									
Site management and facilities	\$	5,400	to	\$	21,600	per mth	18	\$	243,000
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	10	\$	65,000
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	\$	65	to	\$	130	lin ft	5,600	\$	546,000
Structural BMP (bog turtle)	\$	21,600	to	\$	43,100	est.	1	\$	32,400
Subtotal							\$	2,159,200	

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D - Areas of Particular Concern (APCs)						
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		including APCs POI-9, POI-14, and SS-118		
Surface Debris Area :	2.0	acres		including APCs POI-9 and POI-14		
Wetland impact area:	4.8	acres				
Remediation area perimeter:	5,200	feet		includes all APCs.		
Site Preparation						
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
Cap In-Place (POI-09, POI-14, SS-90, SS-97, SS-103, and SS-118)						
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
Excavate and Dispose Offsite (SS-109/TP-09)						
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
Subtotal						\$ 3,728,500

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E - 25-Acre Selected Area (Functional Area 1)					
Remediation area:	25	acres			
Flood hazard area (FHA):	0	acres			
Wetland impact area:	3	acres			
Remediation area perimeter:	6,100	feet			
Site Preparation					
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
Regrade ground to design grades (including 3-ft soil/waste)		\$ 11	cyd	121,000	\$ 1,331,000
Final Closure Cap					
Subtitle D cap		\$ 234,000	acre	25	\$ 5,850,000
Stormwater basin	\$ 21,600 to	\$ 43,100	est.	3	\$ 97,100
Perimeter anchor trench		\$ 3	lin ft	4,270	\$ 12,900
Landform plus enhanced AT		\$ 70	lin ft	1,830	\$ 128,100
Passive LFG control (vents or vents & trenches)	\$ 4,400 to	\$ 6,500	acre	25	\$ 136,300
Wetland 1:1 on-Site reconstruction		\$ 161,600	acre	3.0	\$ 484,800
Wetland restoration (re-vegetation)		\$ 3,300	acre	1	\$ 3,300
Subtotal					\$ 8,170,300
F - Vegetation of Non-Vegetated Areas					
Outside of FHA	2	acres			
Scarify, fertilize, and hydroseed		\$ 3,600	acre	1	\$ 3,600
2-ft soil (veg. support + topsoil) and hydroseed		\$ 120,000	acre	1	\$ 120,000
Subtotal					\$ 123,600
G - Site Controls (physical)					
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
Subtotal					\$ 226,000
H - Site Controls (administrative)					
Institutional controls		\$ 10,800	est.	1	\$ 10,800
Reporting to EPA		\$ 4,400	every 5-ysrs	6	\$ 26,400
Reporting to NJ		\$ 4,400	every 2-ysrs	15	\$ 66,000
Subtotal					\$ 103,200
I - Post-Remedy Operation & Maintenance					
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
Subtotal					\$ 2,217,100
Total					\$ 19,196,000

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.