Table 1

Soil Sample Locations Exceeding the Proposed NYSDEC Section 375 Part 6

Analyte/Building	Sample Identification	Detected Concentration (ug/kg)	Proposed NYSDEC Section 375 Part 6 Unrestricted Use Soil Cleanup Objectives for Commercial Use (ug/kg)
Building 3			
All Soils Exceeding the Cleanup Objectiv	ves for Commercial Use have b	een removed from thi	s building
Building 7			
Arsenic	Tank T4 Bldg28-T4D-041405	21,000	16,000
Arsenic	Bldg28pipetrench-center	22,400	16,000
Arsenic	Bldg28-GP1A-031805	32,000	16,000
Lead	B7-1-9.5-10-110805	1,230,000	1,000,000
Building 8/Service Corridor			
Benzo(a)anthracene	B51-(2-4)	24,000	5,600
Benzo(b)fluoranthene	B51-(2-4)	18,000	5,600
Dibenzo(a,h)anthracene	B51-(2-4)	4,800	560
Indeno(1,2,3-cd)pyrene	B51-(2-4)	13,000	5,600
Benzo(a)pyrene	B51-(2-4)	16,000	1,000
Benzo(a)pyrene	B48-(8-10)	1,800	1,000
Benzo(a)pyrene	B55-(0.5-4.5)	1,800	1,000
Benzo(a)pyrene	B57-(0-5)	1,800	1,000
Benzo(a)pyrene	UST1-NSW-033105	1,600	1,000
Benzo(a)pyrene	Coned-Bot1-022305	1,700	1,000

Notes:

ug/kg: micrograms per kilogram

Table 1B Summary of Soil Sample Results 75 times Above the NYSDEC TAGM #4046 RSCOs

			75-times NYSDEC
Analyte/Building	Soil Samples Above 75 times the NYSDEC TAGM #4046 RSCO ⁽¹⁾	Detected Concentration (ug/kg)	TAGM 4046 RSCO ⁽²⁾ (ug/kg)
Metals			
No Exceedances 75-times TAGM			
VOCs (Building 3)			
Chloroform	B3-37-2.5-3-111405	151,000	4,500
Benzene	B3-37-2.5-3-111406	126,000	4,500
Dichloromethane (Methylene Chloride)	B3-37-2.5-3-111407	11,700	7,500
Methylbenzene (Toluene)	B3-37-2.5-3-111408	345,000	112,500
Tetrachloroethene	B3-37-2.5-3-111409	294,000	105,000
Trichloroethylene	B3-37-2.5-3-111410	1,420,000	52,500
SVOCs (Building 8)			
Benzo(a)anthracene	B51-(2-4)	24,000	16,800
Benzo(a)pyrene	B51-(2-4)	16,000	4,575
Benzo(b)fluoranthene	B51-(2-4)	18,000	16,500
Benzo(k)fluoranthene	B51-(2-4)	19,000	16,500
Dibenzo(a,h)anthracene	B51-(2-4)	4,800	1,050

Notes:

⁽¹⁾ Samples collected from following buildings:

B7-5E-9-9.5--Building 7, south end, 9 to 9.5 ft. bgs

B3-37-2.5-3--Building 3, south end, 2.5 to 3 ft. bgs (drain)

B51-(2-4)--Building 8, east end during initial RI, 2 to 4 ft. bgs

⁽²⁾ RSCO from NYSDEC's TAGM HWR-94-4046, revised January 24, 1994

ug/kg: micrograms per kilogram

VOC: Volatile Organic Compounds

SVOC: Semivolatile Organic Compounds

Table 1C Summary of Soil Sample Results 100 times Above the NYSDEC TAGM #4046 RSCOs

Analyte/Building	Soil Samples Above 100 times the NYSDEC TAGM #4046 RSCO ⁽¹⁾	Detected Concentration (ug/kg)	100-times NYSDEC TAGM 4046 RSCO ⁽²⁾ (ug/kg)			
Metals						
No Exceedances 100-times TAGM						
VOCs (Building 3)						
Chloroform	B3-37-2.5-3-111405	151,000	6,000			
Benzene	B3-37-2.5-3-111406	126,000	6,000			
Dichloromethane (Methylene Chloride)	B3-37-2.5-3-111407	11,700	10,000			
Methylbenzene (Toluene)	B3-37-2.5-3-111408	345,000	150,000			
Tetrachloroethene	B3-37-2.5-3-111409	294,000	140,000			
Trichloroethylene	B3-37-2.5-3-111410	1,420,000	70,000			
SVOCs (Building 8)						
Benzo(a)anthracene	B51-(2-4)	24,000	22,400			
Benzo(a)pyrene	B51-(2-4)	16,000	6,100			
Dibenzo(a,h)anthracene	B51-(2-4)	4,800	1,400			

Notes:

⁽¹⁾ Samples collected from following buildings:

B7-5E-9-9.5--Building 7, south end, 9 to 9.5 ft. bgs

B3-37-2.5-3--Building 3, south end, 2.5 to 3 ft. bgs (drain)

B51-(2-4)--Building 8, east end during initial RI, 2 to 4 ft. bgs

⁽²⁾ RSCO from NYSDEC's TAGM HWR-94-4046, revised January 24, 1994

ug/kg: micrograms per kilogram

VOC: Volatile Organic Compounds

SVOC: Semivolatile Organic Compounds

TABLE 2 REMEDIAL COST ESTIMATE - ALTERNATIVE 1 ATLAS PARK SITE - PARCEL B GLENDALE, NY

PARCEL B PRESENT VALUE SF 108000 \$50 \$54,00.000 Building Value SF 108000 \$50 \$54,00.000 APPROXIMATE REMEDIAL ACTION COSTS Sub-Total \$54,00.000 \$50,000 \$52,000 Image: State Maintenance/Demobilization Image: State Maintenance Image: State Maintenance Sub-Total \$250,000 b Facilities and Utilities MNTH 5 \$1,000 \$20,000 2 Sheeting and Shoring for Excavation Image: State Total \$345,000 \$20,000 2 Sheeting and Shoring LS 1 \$20,000 \$20,000 2 Sheeting and Shoring LS 1 \$20,000 \$20,000 2 Sheeting and Shoring LS 1 \$420,000 \$420,000 3 Building Demolition LS 1 \$420,000 \$420,000 4 Remedial Excavation,/Disposel / Stockpilling Costs Stob-Total \$1,820,000 \$10 \$1,080,000 \$10 \$20,000 \$229,020 \$229,250,000 \$229,250,000	Item #	Description of Work	Unit	Estimated Quantity	Estimated Unit Price	Estimated Cost
Building Value SF 108000 \$50 \$5,400,000 APPROXIMATE REMEDIAL ACTION COSTS Sub-Total \$5,400,000 Image: Control of all building and the stand of the stand of the stand of the stand under the stand of	PARCEL B	PRESENT VALUE			<u>. </u>	
APPROXIMATE REWEDIAL ACTION COSTS Sub-Total \$\$,400,000 7 Mobilization/Site Maintenance/Demobilization I \$250,000 \$250,000 \$250,000 \$250,000 \$250,000 \$250,000 \$250,000 \$250,000 \$250,000 \$250,000 \$250,000 \$250,000 \$250,000 \$250,000 \$250,000 \$250,000 \$250,000 \$250,000 \$250,000 \$250,000 \$250,000 \$250,000 \$250,000 \$250,000 \$250,000 \$220,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$20,000 \$100 \$20,000 \$100 \$20,000 \$100 \$20,000 \$100 \$20,000 \$100 \$20,000 \$100 \$22,02,000 \$20,000		Building Value	SF	108000	\$50	\$5,400,000
APPROXIMATE REMEDIAL ACTION COSTS					Sub-Total	\$5,400,000
1 Mobilization/Site Maintenance/Demobilization/Permits/Site Maintenance U Station a Mobilization/Permits/Site Maintenance LS 1 \$\$250,000 \$\$250,000 \$\$250,000 \$\$250,000 \$\$250,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 \$\$200,000 <td>APPROXIM/</td> <td>ATE REMEDIAL ACTION COSTS</td> <td></td> <td></td> <td></td> <td></td>	APPROXIM/	ATE REMEDIAL ACTION COSTS				
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c Health and Safety Monitoring Equipment MNTHS 5 \$4,000 \$220,000 2 Sheeting and Shoring for Excavation I \$245,000 \$240,000 a Engineer Shoring System LS 1 \$20,000 \$20,000 b Sheet Pile Shoring LS 1 \$20,000 \$20,000 c Install Sheeting and Shoring LS 1 \$20,000 \$2420,000 c Install Sheeting and Shoring LS 1 \$420,000 \$420,000 a Excavate, Haul, Dispose of Solis (10-ft Cut Across Site) Install Sheeting Solis (10-ft Cut Across Site) Instalias (10,000) Solis (10-ft Cut Across Site) <td>b</td> <td>Facilities and Utilities</td> <td>MNTH</td> <td>5</td> <td>\$15,000</td> <td>\$75,000</td>	b	Facilities and Utilities	MNTH	5	\$15,000	\$75,000
Sheeting and Shoring for Excavation Sub-Total \$345,000 a Engineer Shoring System LS 1 \$20,000 \$20,000 b Sheet Pile Shoring LS 1 \$320,000 \$320,000 c Install Sheeting and Shoring LS 1 \$320,000 \$320,000 c Install Sheeting and Shoring LS 1 \$320,000 \$320,000 3 Building Demolition Sub-Total \$320,000 \$\$420,000 \$\$420,000 a Demolition of all Buildings on Parcel B SF 108000 \$10 \$\$1,080,000 4 Remedial Excavate, Haul, Dispose of Solis (10-ft Out Across Site) TON 84070 \$50 \$\$4,203,500 b Excavate, Haul, Dispose of Haz Lead Solis in Bldg 7 TON 1000 \$250,000 \$250,000 \$250,000 \$264,000 \$264,000 \$264,000 \$264,000 \$264,000 \$264,000 \$264,000 \$264,000 \$264,000 \$264,000 \$264,000 \$264,000 \$264,000 \$264,000 \$264,000 \$264,000 \$264	c	: Health and Safety Monitoring Equipment	MNTHS	5	\$4,000	\$20,000
2 Sheeting and Shoring for Excavation Image: Construct of the state of the sta					Sub-Total	\$345,000
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b Sheet Pile Shoring LS 1 \$300,000 \$300,000 c Install Sheeting and Shoring LS 1 \$\$300,000 \$\$420,000 a Demolition of all Buildings on Parcel B SF 108000 \$\$10 \$\$1,080,000 a Demolition of all Buildings on Parcel B SF 108000 \$\$10 \$\$1,080,000 a Remedial Excavation/Disposal/Stockpiling Costs SE 108000 \$\$10 \$\$420,000 a Recavate, Haul, Dispose of Solis (10-tf Cut Across Site) TON 84070 \$\$50 \$\$4,203,500 b Excavate, Haul, Dispose of Deeper "Hot Spot" Solis TON 2000 \$\$100 \$\$200,000 c Excavate, Haul, Dispose of Deeper "Hot Spot" Solis TON 1000 \$\$25 \$\$2,972,550 e Laboratory Costs for Disposal Sampling (Lab Analysis) EA 170 \$1,200 \$200,000 f Engineering and Institutional Controls EA 3 \$100,000 \$300,000 d Laboratory/Data Validation Costs EA 170 \$1,00	a	Engineer Shoring System	LS	1	\$20,000	\$20,000
c Install Sheeting and Shoring LS 1 \$420,000 \$420,000 3 Building Demolition Sub-Total \$740,000 a Demolition of all Buildings on Parcel B SF 108000 \$110 \$1,080,000 4 Remedial Excavation/Disposal/Stockpiling Costs Sub-Total \$1,820,000 \$100 \$200,000 4 Remedial Excavate, Haul, Dispose of Solis (10-ft Cut Across Site) TON 84070 \$550 \$4,203,000 b Excavate, Haul, Dispose of Deeper "Hot Spot" Solis TON 2000 \$100 \$250,000 c Excavate, Haul, Dispose of Deeper "Hot Spot" Solis TON 1000 \$250 \$250,000 6 Laboratory Costs for Disposal Sampling (Lab Analysis) EA 170 \$11,200 \$240,000 5 Engineering and Institutional Controls Sub-Total \$7,830,050 \$200,000 \$200,000 a Sub Slab Depressurization Systems (Buildings 3, 7, and 8) EA 3 \$100,000 \$300,000 \$200,000 \$200,000 \$200,000 \$150,000 \$100,000	b	Sheet Pile Shoring	LS	1	\$300,000	\$300,000
Sub-Total Stub-Total \$740,000 3 Building Demolition Image: Sub-Total \$1,080,000 a Demolition of all Buildings on Parcel B SF 108000 \$10 \$1,080,000 4 Remedial Excavation/Disposal/Stockpiling Costs Image: Sub-Total \$1,820,000 \$100 \$2,000 4 Remedial Excavate, Haul, Dispose of Soils (10-ft Cut Across Site) TON 84070 \$50 \$4,203,500 5 Excavate, Haul, Dispose of Haz Lead Soils in Bldg 7 TON 2000 \$100 \$200,000 \$200,000 \$250,000 \$250,000 \$250,000 \$250,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,000 \$200,00	С	Install Sheeting and Shoring	LS	1	\$420,000	\$420,000
3 Building Demolition	<u> </u>				Sub-Total	\$740,000
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4 Sub-Total \$1,820,000 4 Remedial Excavation/Disposal/Stockpiling Costs	а	Demolition of all Buildings on Parcel B	SF	108000	\$10	\$1,080,000
4 Remedial Excavation/Disposal/Stockpiling Costs	<u></u>				Sub-Total	\$1,820,000
a Excavate, Haul, Dispose of Soils (10-ft Cut Across Site) TON 84070 \$50 \$4,203,500 b Excavate, Haul, Dispose of Deper "Hot Spot" Soils TON 2000 \$100 \$2200,000 c Excavate, Haul, Dispose of Haz Lead Soils in Bldg 7 TON 1000 \$\$250 \$\$250,000 d Backfill to Previous Grade TON 84930 \$\$35 \$\$2,972,550 e Laboratory Costs for Disposal Sampling (Lab Analysis) EA 170 \$\$1,200 \$\$204,000 5 Engineering and Institutional Controls EA 3 \$\$100,000 \$\$300,000 b Operation and Maintenance (20 Years) YR 20 \$\$7,500 \$\$100,000 6 Laboratory/Data Validation Costs \$\$100,000 \$\$170,000 b Sidewall Soil Samples EA 170 \$\$1,000 \$\$27,000 6 Laboratory/Data Validation Costs EA 27 \$\$1,000 \$\$27,000 c Data Validation LS 1 \$\$100,000 \$\$100,000	4	Remedial Excavation/Disposal/Stockpiling Costs				
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c Excavate, Haul, Dispose of Haz Lead Soils in Bldg 7 TON 1000 \$250 \$250,000 d Backfill to Previous Grade TON 84930 \$35 \$\$2,972,550 e Laboratory Costs for Disposal Sampling (Lab Analysis) EA 170 \$1,200 \$204,000 5 Engineering and Institutional Controls Sub-Total \$7,830,050 a Sub Slab Depressurization Systems (Buildings 3, 7, and 8) EA 3 \$100,000 \$355,00 b Operation and Maintenance (20 Years) YR 20 \$7,500 \$150,000 6 Laboratory/Data Validation Costs 450,000 6 Laboratory/Data Validation Costs EA 170 \$1,000 \$27,000 c Data Validation LS 1 \$15,000 \$27,000 c Data Validation LS 1 \$15,000 \$27,000 7 Environmental Consultant Fees (Langan) EA 27 \$1,000 \$27,000 7 Environmental Consultant Fees (Langan) LS 1 \$100,000 \$500,000 \$500,000	b	Excavate, Haul, Dispose of Deeper "Hot Spot" Soils	TON	2000	\$100	\$200,000
d Backfill to Previous Grade TON 84930 \$35 \$2,972,550 e Laboratory Costs for Disposal Sampling (Lab Analysis) EA 170 \$1,200 \$204,000 5 Engineering and Institutional Controls Sub-Total \$7,830,050 a Sub Slab Depressurization Systems (Buildings 3, 7, and 8) EA 3 \$100,000 \$300,000 b Operation and Maintenance (20 Years) YR 20 \$7,500 \$150,000 6 Laboratory/Data Validation Costs Sub-Total \$450,000 6 Laboratory/Data Validation Costs EA 170 \$1,000 \$170,000 6 Laboratory/Data Validation EA 170 \$1,000 \$170,000 b Sidewall Soil Samples EA 170 \$1,000 \$27,000 c Data Validation LS 1 \$15,000 \$150,000 c Data Validation LS 1 \$100,000 \$100,000 c Data Validation LS 1 \$100,000 \$500,000 c Data Validation LS <t< td=""><td>С</td><td>Excavate, Haul, Dispose of Haz Lead Soils in Bldg 7</td><td>TON</td><td>1000</td><td>\$250</td><td>\$250,000</td></t<>	С	Excavate, Haul, Dispose of Haz Lead Soils in Bldg 7	TON	1000	\$250	\$250,000
e Laboratory Costs for Disposal Sampling (Lab Analysis) EA 170 \$1,200 \$224,000 e Engineering and Institutional Controls Sub-Total \$7,830,050 a Sub Slab Depressurization Systems (Buildings 3, 7, and 8) EA 3 \$100,000 \$300,000 b Operation and Maintenance (20 Years) YR 20 \$7,500 \$100,000 \$300,000 6 Laboratory/Data Validation Costs EA 3 \$100,000 \$300,000 \$450,000 6 Laboratory/Data Validation Costs EA 170 \$1,000 \$170,000 \$170,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000 \$27,000	d	Backfill to Previous Grade	TON	84930	\$35	\$2,972,550
5 Engineering and Institutional Controls Sub-Total \$7,830,050 a Sub Slab Depressurization Systems (Buildings 3, 7, and 8) EA 3 \$100,000 \$300,000 b Operation and Maintenance (20 Years) YR 20 \$7,500 \$150,000 6 Laboratory/Data Validation Costs \$4450,000 \$4450,000 6 Laboratory/Data Validation Costs \$450,000 a End Point Soil Samples EA 170 \$1,000 \$170,000 b Sidewall Soil Samples EA 27 \$1,000 \$27,000 c Data Validation LS 1 \$15,000 \$27,000 c Data Validation LS 1 \$100,000 \$270,000 c Data Validation LS 1 \$100,000 \$270,000 c Data Validation LS 1 \$100,000 \$500,000 d Langan Office and Field Oversight MNTH 5 \$100,000 \$100,000 \$100,000 \$20,0000	e	Laboratory Costs for Disposal Sampling (Lab Analysis)	EA	170	\$1,200	\$204,000
5 Engineering and Institutional Controls Image: Control of the systems (Buildings 3, 7, and 8) EA 3 \$100,000 \$300,000 b Operation and Maintenance (20 Years) YR 20 \$7,500 \$150,000 b Operation and Maintenance (20 Years) YR 20 \$7,500 \$150,000 6 Laboratory/Data Validation Costs Image: Control of Sub-Total \$450,000 a End Point Soil Samples EA 170 \$1,000 \$170,000 b Sidewall Soil Samples EA 27 \$1,000 \$27,000 c Data Validation LS 1 \$15,000 \$150,000 7 Environmental Consultant Fees (Langan) Image:	<u> </u>				Sub-Total	\$7,830,050
a Sub Slab Depressurization Systems (Buildings 3, 7, and 8) EA 3 \$100,000 \$300,000 b Operation and Maintenance (20 Years) YR 20 \$7,500 \$150,000 c Laboratory/Data Validation Costs Sub-Total \$450,000 a End Point Soil Samples EA 170 \$1,000 \$27,000 b Sidewall Soil Samples EA 27 \$1,000 \$27,000 c Data Validation LS 1 \$15,000 \$27,000 c Data Validation LS 1 \$100,000 \$150,000 c Data Validation LS 1 \$100,000 \$150,000 c Data Validation LS 1 \$100,000 \$150,000 c Data Validation LS 1 \$100,000 \$100,000 a Langan Office and Field Oversight MNTH 5 \$100,000 \$100,000 b Reporting (RAWP, FER, OM&M, SSDS Design) LS 1 \$100,000 \$20,000 c Sub-Total \$600,000 \$600,0000 \$600,000 \$5,	5	Engineering and Institutional Controls				
b Operation and Maintenance (20 Years) YH 20 \$/,500 \$150,000 6 Laboratory/Data Validation Costs Sub-Total \$450,000 6 Laboratory/Data Validation Costs EA 170 \$1,000 \$170,000 a End Point Soil Samples EA 170 \$1,000 \$27,000 b Sidewall Soil Samples EA 27 \$1,000 \$27,000 c Data Validation LS 1 \$15,000 \$100,000 c Data Validation LS 1 \$150,000 \$100,000 7 Environmental Consultant Fees (Langan) C C C a Langan Office and Field Oversight MNTH 5 \$100,000 \$500,000 a Langan Office and Field Oversight MNTH 5 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$10	a	Sub Slab Depressurization Systems (Buildings 3, 7, and 8)	EA	3	\$100,000	\$300,000
6 Laboratory/Data Validation Costs Sub-Total \$450,000 a End Point Soil Samples EA 170 \$1,000 \$170,000 b Sidewall Soil Samples EA 27 \$1,000 \$27,000 c Data Validation LS 1 \$15,000 \$27,000 7 Environmental Consultant Fees (Langan) LS 1 \$100,000 \$500,000 a Langan Office and Field Oversight MNTH 5 \$100,000 \$500,000 b Reporting (RAWP, FER, OM&M, SSDS Design) LS 1 \$100,000 \$100,000 c Sub-Total \$22,200 \$100,000 \$500,000 \$500,000 b Reporting (RAWP, FER, OM&M, SSDS Design) LS 1 \$100,000 \$100,000 c Sub-Total \$600,000 \$100,000 \$100,000 \$2,609,558 Contingency (30%) \$2,219,115 \$2,25,225,723 \$2,25,723 \$2,25,225,723	b	Operation and Maintenance (20 Years)	YR	20	\$7,500	\$150,000
6 Laboratory/Data Validation Costs	<u> </u>				Sub-Totai	\$450,000
a End Point Soil Samples EA 170 \$1,000 \$170,000 b Sidewall Soil Samples EA 27 \$1,000 \$27,000 c Data Validation LS 1 \$15,000 \$27,000 c Data Validation LS 1 \$15,000 \$27,000 7 Environmental Consultant Fees (Langan) Sub-Total \$272,000 a Langan Office and Field Oversight MNTH 5 \$100,000 \$500,000 b Reporting (RAWP, FER, OM&M, SSDS Design) LS 1 \$100,000 \$100,000 c Sub-Total \$600,000 \$600,000 \$600,000 \$600,000 \$600,000 Contingency (30%) LS 1 \$100,000 \$600,000 \$600,000 \$600,000 \$600,000 \$600,000 \$600,000 \$600,000 \$600,000 \$600,000 \$600,000 \$600,000 \$600,000 \$600,000 \$600,000 \$600,000 \$600,000 \$600,000 \$600,000 \$600,000 \$600,000 \$600,000 \$600,000 \$600,000 \$600,000 \$600,000 \$600,000 \$600,000 \$60	6	Laboratory/Data Validation Costs	-			
b Sidewall Soil Samples EA 27 \$1,000 \$27,000 c Data Validation LS 1 \$15,000 \$15,000 7 Environmental Consultant Fees (Langan) SUB-Total \$27,000 a Langan Office and Field Oversight MNTH 5 \$100,000 \$500,000 b Reporting (RAWP, FER, OM&M, SSDS Design) LS 1 \$100,000 \$600,000 Conting (RAWP, FER, OM&M, SSDS Design) LS 1 \$100,000 \$600,000 Conting (RAWP, FER, OM&M, SSDS Design) LS 1 \$100,000 \$600,000 Conting (RAWP, FER, OM&M, SSDS Design) LS 1 \$100,000 \$600,000 Conting (RAWP, FER, OM&M, SSDS Design) LS 1 \$100,000 \$600,000 Conting (RAWP, FER, OM&M, SSDS Design) LS 1 \$100,000 \$600,000 Conting (RAWP, FER, OM&M, SSDS Design) LS 1 \$200,000 \$5,219,115 Conting (SAW, SSDS Design) TOTAL ESTIMATED COSTS FOR ALTERNATIVE #1 \$25,225,723 \$25,225,723 Conting (SAW, SSS) Environmental Costs \$25,220,723 \$200,000 \$	a	End Point Soil Samples	EA	170	\$1,000	\$170,000
c Data Validation LS 1 \$15,000 \$15,000 7 Environmental Consultant Fees (Langan) Sub-Total \$212,000 a Langan Office and Field Oversight MNTH 5 \$100,000 \$500,000 b Reporting (RAWP, FER, OM&M, SSDS Design) LS 1 \$100,000 \$100,000 V Sub-Total \$600,000 \$212,000 \$200,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$100,000 \$	b	Sidewall Soil Samples	EA	27	\$1,000	\$27,000
7 Environmental Consultant Fees (Langan) Sub-Fotal \$2,000 a Langan Office and Field Oversight MNTH 5 \$100,000 \$500,000 b Reporting (RAWP, FER, OM&M, SSDS Design) LS 1 \$100,000 \$100,000 c Sub-Total \$00-Total \$000 \$100,000 c Sub-Total \$100,000 \$100,000 c Sub-Total \$100,000 \$100,000 c Sub-Total \$2,609,558 \$2,609,558 c Contingency (30%) \$5,219,115 \$25,225,723 TOTAL ESTIMATED COSTS FOR ALTERNATIVE #1 \$25,225,723 ROUIND TO \$25,225,723	С	Data Validation	LS	1	\$15,000	\$15,000
A Environmental consultant rees (Langan) S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S		Environmental Consultant Eges (Langan)	++		Sub-iolai	φ <i>212,000</i>
a Langah Office and Field Oversignt Minin 5 \$100,000 \$500,000 b Reporting (RAWP, FER, OM&M, SSDS Design) LS 1 \$100,000 \$100,000 \$100,000 Total Capitol Costs \$17,397,050 Administration, Insurance, and Engineering (15%) \$2,609,558 Contingency (30%) \$5,219,115 TOTAL ESTIMATED COSTS FOR ALTERNATIVE #1 \$252,5723 DOUIND TO \$25,200,000				5	¢100.000	¢500.000
b Reporting (NAWP, PEN, Oliviality, SSUS Design) LS i 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 910,000 9	a b	Langan Office and Field Oversigni Penerting (PAWP EER OM&M SSDS Design)		5 1	\$100,000	\$300,000 \$100,000
Total Capitol Costs \$17,397,050 Administration, Insurance, and Engineering (15%) \$2,609,558 Contingency (30%) \$5,219,115 TOTAL ESTIMATED COSTS FOR ALTERNATIVE #1 \$25,225,723 DOULDE TO \$25,200,000		Reporting (RAWT, TER, OWAW, 3305 Design)			Sub-Total	\$600,000
Total Capitol Costs \$17,397,050 Administration, Insurance, and Engineering (15%) \$2,609,558 Contingency (30%) \$5,219,115 TOTAL ESTIMATED COSTS FOR ALTERNATIVE #1 \$25,225,723 Description \$25,200,000	·	L			Sub-Tolai	\$000,000
Administration, Insurance, and Engineering (15%) \$2,609,558 Contingency (30%) \$5,219,115 TOTAL ESTIMATED COSTS FOR ALTERNATIVE #1 \$25,225,723	1				Total Capitol Costs	\$17.397.050
Contingency (30%) \$5,219,115 TOTAL ESTIMATED COSTS FOR ALTERNATIVE #1 \$25,225,723	i	d Engineering (15%)	\$2,609,558			
TOTAL ESTIMATED COSTS FOR ALTERNATIVE #1 \$25,225,723					Contingency (30%)	\$5,219,115
	1	TOTAL F	STIMATED	COSTS FOR A	I TERNATIVE #1	\$25,225,723
				0001010111		\$25,200,000

Line Item Notes

- 1b Facilties and Utilities cost estimate includes cost of leasing and installing the office trailers and connections to utilities
- 2 Perimeter cost estimate assumes that sheet pile walls will be required along most of the southern, western and northern property boundaries.
- These bound critical critical structural locations such as Lon Island Railroad Easement, 80th Street Viaduct, and Cooper Avenue.
- 3a Demolition of Buildings 3, 7, and 8 including removal of foundations.

4a/b/c Soil Excavation cost estimate assumes typical excavation costs for the New York City area and an average disposal cost for the excavated soil. A cut of 10 feet across the site is assumed. A relatively small amount of hazardous material is expected in the Building 7 Area (approx 500 tons).

- 4d Site grade will be restored to historic grade prior to excavation activities. Backfill material will be Certified TAGM clean materials. Price includes placement of material.
- 4e Waste characterization sampling and analysis for soil disposal purposes, to facilitate disposal facility acceptance
- 5a SSDS systems installed in all buildings to mitigate potential residual vapors remaining in soil pore space. Material, construction, and oversight costs included. Does not include OM&M
- 5b Includes operation and maintenance of the three systems over an estimated 20 year period.
- 6 Soil sampling for end point and sidewall samples per DER-10.
- 7a Assumes a team of three Langan personnel onsite full time with office support when needed.
- 7b Cost to prepare and submit Remedial Action Workplan, Final Engineering Report, SSDS Design and OM&M Plans.

General Notes

- 1 There are no operations and maintenance costs associated with Alternative I as the site is cleaned to Track 1 standard.
- 2 Total estimated cost is the sum of all estimated costs rounded up to the nearest million dollars.

¹a Mobilization and demobilization cost estimate includes mobolization and demobilization of all labor, equipment, and materials necessary to excavate, transport, and dispose offsite the targeted soil in the excavation areas and the USTs. Any project related permit or regulation fees associated with this project are assumed to be part of the mobilization cost. Soil and Erosion Plan and Stormwater Management cost estimate assumes appropriate application of BMPs and tempory stormwater systems.

TABLE 3 REMEDIAL COST ESTIMATE - ALTERNATIVE #2 ATLAS PARK SITE - PARCEL B GLENDALE. NY

Item #	Description of Work	Unit	Estimated Quantity	Estimated Unit Price	Estimated Cost
APPROXIMATE	E REMEDIAL ACTION COSTS				
1	Mobilization/Site Maintenance/Demobilization				
	a Mobilization/Demobilization/Permits/Site Maintenance	LS	1	\$100,000	\$100,000
	Facilities and Utilities	MNTHS	3	\$15,000	\$45,000
	Health and Safety Monitoring Equipment	MNTHS	3	\$4,000	\$12,000
				Sub-Total	\$157,000
2	Disposal of Excavated Soils				
	a Soil Disposal	TON	3000	\$50	\$150,000
	Laboratory Costs for Disposal Sampling (Lab Analysis)	EA	5	\$1,200	\$6,000
				Sub-Total	\$156,000
3	Engineering and Institutional Controls				
	a Sub Slab Depressurization Systems (Buildings 3, 7, and 8)	EA	3	\$100,000	\$300,000
	Operation and Maintenance (20 Years)	YR	20	\$7,500	\$150,000
				Sub-Total	\$450,000
4	Soil Vapor Extraction System (Building 3)				
a	SVE System Design	LS	1	\$15,000	\$15,000
b	SVE Components and Construction	LS	1	\$75,000	\$75,000
С	Operation and Maintenance (20 Years)	YR	20	\$15,000	\$300,000
				Sub-Total	\$390,000
5	Laboratory/Data Validation Costs				
a	End Point Soil Samples (Building 3 Hot Spots)	EA	2	\$1,000	\$2,000
b	Sidewall Soil Samples (Building 3 Hot Spots)	EA	8	\$1,000	\$8,000
С	Data Validation	LS	1	\$5,000	\$5,000
				Sub-Total	\$15,000
6	Environmental Consultant Fees (Langan)				
a	Environmental Oversight and Office Support	MNTHS	4	\$60,000	\$240,000
b	Reporting (FER, SMP, OM&M Plans (2), Deed Notice)	LS	1	\$125,000	\$125,000
				Sub-Total	\$365,000
Total Capitol Costs Administration, Insurance, and Engineering (15%)					\$1,533,000
					\$229,950
Contingency (30%)				Contingency (30%)	\$459,900
	TOTAL ES	TIMATED CO	STS FOR AL	TERNATIVE #2	\$2,222,850
				ROUND TO	\$2,300,000

Line Item Notes

- 1a Mobilization and demobilization cost estimate includes mobolization and demobilization of all labor, equipment, and materials necessary to excavate, transport, and dispose offsite the targeted soil in the excavation areas and the USTs. Any project related permit or regulation fees associated with this project are assumed to be part of the mobilization cost. Soil and Erosion Plan and Stormwater Management cost estimate assumes appropriate application of BMPs and tempory stormwater systems.
- 1b Facilties and Utilities cost estimate includes cost of leasing and installing the office trailers and connections to utilities
- 2a Soil Excavation cost estimate assumes typical excavation costs for the New York City area and an average disposal cost for the excavated soil. All soils anticipated to be non-hazardous and disposed of at a permitted non-hazardous soil disposal/treatment facility in New York, New Jersey, or Massachusetts.
- 2b Waste characterization sampling and analysis for soil disposal purposes.
- 3a SSDS systems installed in all buildings to mitigate potential residual vapors remaining in soil pore space. Material,
- 3b Includes operation and maintenance of the three systems over an estimated 20 year period.
- 4a Cost for Langan to design a soil vapor extraction system for Building 3
- 4b Cost of all components and installation
- 4c Cost per year for operation and general maintenance of the system, including carbon change out, filters, etc.
- 5 Soil sampling for end point and sidewall samples per DER-10.
- 6a Assumes a team of three Langan personnel onsite full time with office support when needed.
- 6b Cost to prepare and submit Remedial Action Workplan, Final Engineering Report, OM&M Plans, and preparation of Deed Notice.

General Notes

- 1 There are no operations and maintenance costs associated with Alternative I as the site is cleaned to Track 1 standard.
- 2 Total estimated cost is the sum of all estimated costs rounded up to the nearest million dollars.

TABLE 4 REMEDIAL COST ESTIMATE - ALTERNATIVE #3 ATLAS PARK SITE - PARCEL B GLENDALE, NY

ltem #	Description of Work	Unit	Estimated Quantity	Estimated Unit Price	Estimated Cost			
APPROXIM	APPROXIMATE REMEDIAL ACTION COSTS							
1	Mobilization/Site Maintenance/Demobilization							
a	Mobilization/Demobilization/Permits/Site Maintenance	LS	1	\$150,000	\$150,000			
b	Facilities and Utilities	MNTHS	3	\$15,000	\$45,000			
				Sub-Total	\$195,000			
2	Excavation for Construction Purposes	1 ,						
a	Soil Disposal Resulting from Construction	TONS	3000	\$50	\$150,000			
b	Laboratory Costs for Disposal Sampling (Lab Analysis)	EA	10	\$1,200	\$12,000			
		1		Sub-Total	\$162,000			
3	Engineering and Institutional Controls	1						
a	Sub Slab Depressurization Systems (Buildings 3, 7, and 8)	EA	3	\$100,000	\$300,000			
b	Operation and Maintenance (20 Years)	YR	20	\$7,500	\$150,000			
			;	Sub-Total	\$450,000			
4	Remedial Excavation/Disposal/Stockpiling Costs		;					
a	Excavate, Haul, Dispose of Soils (50x TAGM Exceedances)	TONS	1500	\$50	\$75,000			
b	Excavate, Haul, Dispose of Deeper "Hot Spot" Soils	TONS	1500	\$250	\$375,000			
с	Backfill to Previous Grade	TONS	2400	\$35	\$84,000			
d	Laboratory Costs for Disposal Sampling (Lab Analysis)	EA	12	\$1,500	\$18,000			
				Sub-Total	\$552,000			
5	Soil Vapor Extraction System (Building 3)				· · ·			
а	SVE System Design	LS	1	\$15,000	\$15,000			
b	SVE Components and Construction	LS	1	\$75,000	\$75,000			
с	Operation and Maintenance (20 Years)	YR	20	\$15,000	\$300,000			
			;	Sub-Total	\$390,000			
6	Laboratory/Data Validation Costs		;					
a	End Point Soil Samples	EA	9	\$1,000	\$9,000			
b	Sidewall Soil Samples	EA	36	\$1,000	\$36,000			
с	Data Validation	LS	3	\$5,000	\$15,000			
				Sub-Total	\$60,000			
7	Environmental Consultant Fees (Langan)		;	l l				
a	Environmental Oversight and Office Support	MNTHS	6	\$90	\$540			
b	Reporting (FER, SMP, OM&M, SMP, Deed Notice)	LS	1	\$125,000	\$125,000			
				Sub-Total	\$125,540			
			·	Total Capitol Costs	\$1,934,540			
Administration, Insurance, and Engineering (15%)					\$290.181			
Continaency (30%)					\$580.362			
1				I TEDNIATIVE #2	\$2 805 083			
		TIMATED	0513 FUR A	LIENNAIIVE #3	φ2,000,000			
			,	ROUND TO	\$2.800.000			

Line Item Notes

- 1a Mobilization and demobilization cost estimate includes mobolization and demobilization of all labor, equipment, and materials necessary to excavate, transport, and dispose offsite the targeted soil in the excavation areas and the USTs. Any project related permit or regulation fees associated with this project are assumed to be part of the mobilization cost. Soil and Erosion Plan and Stormwater Management cost estimate assumes appropriate application of BMPs and tempory stormwater systems.
- 1b Facilities and Utilities cost estimate includes cost of leasing and installing the office trailers and connections to utilities
- 2a Soil Excavation cost estimate assumes typical excavation costs for the New York City area and an average disposal cost for the excavated soil. All soils anticipated to be non-hazardous and disposed of at a permitted non-hazardous soil disposal/treatment facility in New York, New Jersey, or Massachusetts.
- 2b Waste characterization sampling and analysis for soil disposal purposes.
- 3a SSDS systems installed in all buildings to mitigate potential residual vapors remaining in soil pore space. Material, construction, and oversight costs included. Does not include OM&M
- 3b Includes operation and maintenance of the three systems over an estimated 20 year period.
- 4a/b Soil Excavation cost estimate assumes typical excavation costs for the New York City area and an average disposal cost for the excavated soil. Approximately 500 tons of material will require removal to meet the 50 times TAGM 4046 criteria. This material is assumed to be nonhazardous. Approximately 250 tons of material will be generated from excavations deeper than 10 to 12 feet below existing grade.
- 4c Site grade will be restored to historic grade prior to excavation activities. Backfill material will be Certified TAGM clean materials. Price includes placement of material.
- 4d Waste characterization sampling and analysis for soil disposal purposes, to facilitate disposal facility acceptance criteria.
- 5a Cost for Langan to design a soil vapor extraction system for Building 3
- 5b Cost of all components and installation
- 5c Cost per year for operation and general maintenance of the system, including carbon change out, filters, etc.
- 6 Soil sampling for end point and sidewall samples per DER-10.
- 7a Assumes a team of three Langan personnel onsite full time with office support when needed.
- 7b Cost to prepare and submit Remedial Action Workplan, Final Engineering Report, OM&M Plans, and preparation of Deed Notice.

General Notes

- 1 There are no operations and maintenance costs associated with Alternative I as the site is cleaned to Track 1
- 2 Total estimated cost is the sum of all estimated costs rounded up to the nearest million dollars.