Summary of Annual Costs for CDE Site

Activity	Estimate Year	Adjustment Factor	Scenario Probability	Second Option Probability	Note	Total	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
							1	2	3	4	5	6	7	8	9	10
Inflation Factor							1.000	1.013	1.029	1.048	1.069	1.092	1.118	1.144	1.170	1.197
Discount Factor							1.000	0.999	0.995	0.989	0.976	0.958	0.933	0.904	0.878	0.849
Costs in Present Value Year 2011 Dollars																
I. OU1 - Residential/Commercial/Municipal Properties																
A. Remedial Design	2011				[1]	405,554	-	405,554	-	-	-	-	-	-	-	-
B. Remedial Action	2011				[1]	2,543,380	-	2,543,380	-	-	-	-	-	-	-	-
Total OU1 Costs in PV 2011 Dollars	**2011**					**2,948,934**	**-**	**2,948,934**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
II. OU2 - CDE Site Soils																
A. Remedial Design	2011				[1]	308,730	-	308,730	-	-	-	-	-	-	-	-
B. Remedial Action - Building Demolition	2011				[1]	27,696	-	27,696	-	-	-	-	-	-	-	-
C. Remedial Action - Offsite Disposal & Capping	2011				[1]	20,371,906	-	20,371,906	-	-	-	-	-	-	-	-
D. O&M (inspect and repair cap)	2011				[2]	698,057	-	-	25,607	25,912	26,070	26,148	26,091	25,861	25,684	25,412
E. Five-Year Reviews	2011				[3]	1,076,391	-	75,899	-	-	-	-	78,273	-	-	-
Total OU2 Costs in PV 2011 Dollars	**2011**					**22,482,780**	**-**	**20,784,231**	**25,607**	**25,912**	**26,070**	**26,148**	**104,364**	**25,861**	**25,684**	**25,412**
III. OU3																
A. Studies																
1. RI/FS	2011				[1]	469,428	-	469,428	-	-	-	-	-	-	-	-
B. Groundwater Treatment Scenarios																
1. Scenario 1																
Alternative 3A Capital & Startup	2011				[4]	580,616	-	-	580,616	-	-	-	-	-	-	-
Alternative 3A O&M	2011				[5]	12,376,733	-	-	-	188,125	189,268	189,832	189,420	187,754	186,466	184,488
No Further Treatment	2011					-	-	-	-	-	-	-	-	-	-	-
Treat Groundwater at Brook Capital	2011				[6a]	78,963	-	-	-	78,963	-	-	-	-	-	-
Treat Groundwater at Brook O&M	2011				[7a]	3,047,152	-	-	-	-	47,317	47,458	47,355	46,939	46,616	46,122
2. Scenario 2																
Alternative 4 Thermal Source Area Treatment	2011				[8]	2,161,601	-	-	2,161,601	-	-	-	-	-	-	-
3. Scenario 3																
Alternative 2 Capital Cost (included in III.C)	2011					-	-	-	-	-	-	-	-	-	-	-
Alternative 2 O&M (included in III.D)	2011					-	-	-	-	-	-	-	-	-	-	-
No Further Treatment	2011					-	-	-	-	-	-	-	-	-	-	-
Treat Groundwater at Brook Capital	2011				[6b]	882,694	-	-	-	882,694	-	-	-	-	-	-
Treat Groundwater at Brook O&M	2011				[7b]	14,220,044	-	-	-	-	220,812	221,470	220,990	219,047	217,543	215,236
C. Monitoring and Institutional Controls -- Capital	2011				[10]	1,116,471	-	-	1,116,471	-	-	-	-	-	-	-
D. Monitoring and Institutional Controls -- O&M	2011				[10]	17,026,351	-	-	-	1,101,799	1,108,494	643,231	641,836	636,192	358,548	354,745
E. Corps Oversight	2011					-	-	-	-	-	-	-	-	-	-	-
F. EPA Oversight	2011				[11]	1,558,802	-	14,083	115,761	67,547	46,977	33,060	32,988	32,698	24,275	24,018
G. EPA Indirect Costs	2011				[12]	14,219,960	-	128,469	1,056,011	616,192	428,539	301,583	300,929	298,283	221,447	219,099
Total OU3 Costs in PV 2011 Dollars	**2011**					**67,738,814**	**-**	**611,979**	**5,030,460**	**2,935,319**	**2,041,407**	**1,436,633**	**1,433,518**	**1,420,912**	**1,054,896**	**1,043,707**
IV. OU4 Bound Brook																
A. RI/FS	2011				[2]	2,833,566	-	2,833,566	-	-	-	-	-	-	-	-
B. Remedial Design	2011				[2]	4,166,935	-	-	-	1,381,999	1,390,397	1,394,539	-	-	-	-
C. Sediment Excavation																
1. Sediment and Floodplain excavation	2011				[14]	87,861,364	-	-	-	-	-	10,839,520	10,033,286	9,945,060	17,582,731	10,013,916
2. Re-Dredge Sediment Traps	2011				[15]	1,144,330	-	-	-	-	-	-	-	-	-	-
3. Re-Dredge New Market Pond	2011				[16]	2,237,248	-	-	-	-	-	-	-	-	-	-
D. Long-Term O&M	2011				[2]	752,232	-	-	-	-	-	-	78,273	77,584	77,052	76,235
E. Corps Oversight	2011				[2]	2,500,161	-	-	-	829,199	834,238	836,723	-	-	-	-
F. EPA Oversight	2011				[11]	3,044,875	-	85,007	-	66,336	66,739	392,123	303,347	300,679	529,793	302,705
G. EPA Indirect Costs	2011				[12]	27,776,467	-	775,465	-	605,141	608,818	3,577,094	2,767,240	2,742,907	4,832,970	2,761,382
Total OU4 Costs in PV 2011 Dollars (EV)	**2011**					**132,317,179**	**-**	**3,694,038**	**-**	**2,882,675**	**2,900,193**	**17,040,000**	**13,182,146**	**13,066,230**	**23,022,546**	**13,154,237**
V. Re-route Water Main																
A. Capital Costs	2011				[13]	4,875,867	-	-	-	-	-	-	4,875,867	-	-	-
B. EPA Oversight	2011				[11]	146,276	-	-	-	-	-	-	146,276	-	-	-
C. EPA Indirect Costs	2011				[12]	1,334,383	-	-	-	-	-	-	1,334,383	-	-	-
Total Costs to Re-route Water Main in PV 2011 Dollars						**6,356,527**	**-**	**-**	**-**	**-**	**-**	**-**	**6,356,527**	**-**	**-**	**-**
PV 2011 Indirect Costs (Expected Value)	2011					43,330,810	-	903,984	1,056,011	1,221,333	1,037,357	3,878,677	4,402,553	3,041,190	5,054,418	2,980,480
PV 2011 Direct Costs (Expected Value)	2011					188,513,423	-	27,135,249	4,000,056	4,622,574	3,930,313	14,624,104	16,674,001	11,471,815	19,048,708	11,242,876
PV 2011 Total Site Costs (Expected Value)	**2011**					**231,844,234**	**-**	**28,039,183**	**5,056,067**	**5,843,907**	**4,967,670**	**18,502,781**	**21,076,554**	**14,513,004**	**24,103,126**	**14,223,356**

Summary of Annual Costs for CDE Site

Activity	Estimate Year	Adjustment Factor	Scenario Probability	Second Option Probability	Note	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total 2030-2110
						11	12	13	14	15	16	17	18	19	
Inflation Factor						1.225	1.253	1.282	1.311	1.342	1.372	1.404	1.436	1.469	
Discount Factor						0.818	0.795	0.773	0.749	0.726	0.702	0.678	0.654	0.629	
Costs in Present Value Year 2011 Dollars															
I. OU1 - Residential/Commercial/Municipal Properties															
A. Remedial Design	2011				[1]	-	-	-	-	-	-	-	-	-	-
B. Remedial Action	2011				[1]	-	-	-	-	-	-	-	-	-	-
Total OU1 Costs in PV 2011 Dollars	**2011**					-	-	-	-	-	-	-	-	-	-
II. OU2 - CDE Site Soils															
A. Remedial Design	2011				[1]	-	-	-	-	-	-	-	-	-	-
B. Remedial Action - Building Demolition	2011				[1]	-	-	-	-	-	-	-	-	-	-
C. Remedial Action - Offsite Disposal & Capping	2011				[1]	-	-	-	-	-	-	-	-	-	-
D. O&M (Inspect and repair cap)	2011				[2]	25,048	24,920	24,758	24,562	24,334	24,075	23,784	23,465	23,117	273,209
E. Five-Year Reviews	2011				[3]	-	74,759	-	-	-	-	71,353	-	-	776,107
Total OU2 Costs in PV 2011 Dollars	**2011**					**25,048**	**99,679**	**24,758**	**24,562**	**24,334**	**24,075**	**95,138**	**23,465**	**23,117**	**1,049,315**
III. OU3															
A. Studies															
1. RI/FS	2011				[1]	-	-	-	-	-	-	-	-	-	-
B. Groundwater Treatment Scenarios															
1. Scenario 1															
Alternative 3A Capital & Startup	2011				[4]	-	-	-	-	-	-	-	-	-	-
Alternative 3A O&M	2011				[5]	181,845	180,917	179,741	178,322	176,667	174,782	172,675	170,356	167,833	9,478,244
No Further Treatment	2011					-	-	-	-	-	-	-	-	-	-
Treat Groundwater at Brook Capital	2011				[6a]	-	-	-	-	-	-	-	-	-	-
Treat Groundwater at Brook O&M	2011				[7a]	45,461	45,229	44,935	44,581	44,167	43,695	43,169	42,589	41,958	2,369,561
2. Scenario 2															
Alternative 4 Thermal Source Area Treatment	2011				[8]	-	-	-	-	-	-	-	-	-	-
3. Scenario 3															
Alternative 2 Capital Cost (included in III.C)	2011					-	-	-	-	-	-	-	-	-	-
Alternative 2 O&M (included in III.D)	2011					-	-	-	-	-	-	-	-	-	-
No Further Treatment	2011					-	-	-	-	-	-	-	-	-	-
Treat Groundwater at Brook Capital	2011				[6b]	-	-	-	-	-	-	-	-	-	-
Treat Groundwater at Brook O&M	2011				[7b]	212,153	211,070	209,698	208,043	206,111	203,912	201,454	198,748	195,805	11,057,951
C. Monitoring and Institutional Controls -- Capital	2011				[10]	-	-	-	-	-	-	-	-	-	-
D. Monitoring and Institutional Controls -- O&M	2011				[10]	349,664	347,879	345,618	342,890	339,707	336,082	332,031	327,571	164,596	9,295,468
E. Corps Oversight	2011					-	-	-	-	-	-	-	-	-	-
F. EPA Oversight	2011				[11]	23,674	23,553	23,400	23,215	23,000	22,754	22,480	22,178	17,106	966,037
G. EPA Indirect Costs	2011				[12]	215,960	214,858	213,461	211,776	209,810	207,572	205,070	202,315	156,045	8,812,541
Total OU3 Costs in PV 2011 Dollars	**2011**					**1,028,758**	**1,023,507**	**1,016,854**	**1,008,827**	**999,461**	**988,797**	**976,878**	**963,756**	**743,343**	**41,979,801**
IV. OU4 Bound Brook															
A. RI/FS	2011				[2]	-	-	-	-	-	-	-	-	-	-
B. Remedial Design	2011				[2]	-	-	-	-	-	-	-	-	-	-
C. Sediment Excavation															
1. Sediment and Floodplain excavation	2011				[14]	9,870,481	9,820,103	9,756,267	-	-	-	-	-	-	-
2. Re-Dredge Sediment Traps	2011				[15]	-	-	-	-	-	-	-	-	-	1,144,330
3. Re-Dredge New Market Pond	2011				[16]	-	-	-	-	-	-	-	-	-	2,237,248
D. Long-Term O&M	2011				[2]	75,143	74,759	74,273	73,687	73,003	72,224	-	-	-	-
E. Corps Oversight	2011				[2]	-	-	-	-	-	-	-	-	-	-
F. EPA Oversight	2011				[11]	298,369	296,846	294,916	2,211	2,190	2,167	-	-	-	101,447
G. EPA Indirect Costs	2011				[12]	2,721,829	2,707,937	2,690,334	20,166	19,979	19,766	-	-	-	925,440
Total OU4 Costs in PV 2011 Dollars (EV)	**2011**					**12,965,821**	**12,899,645**	**12,815,790**	**96,064**	**95,172**	**94,156**	-	-	-	**4,408,465**
V. Re-route Water Main															
A. Capital Costs	2011				[13]	-	-	-	-	-	-	-	-	-	-
B. EPA Oversight	2011				[11]	-	-	-	-	-	-	-	-	-	-
C. EPA Indirect Costs	2011				[12]	-	-	-	-	-	-	-	-	-	-
Total Costs to Re-route Water Main in PV 2011 Dollars						-	-	-	-	-	-	-	-	-	-
PV 2011 Indirect Costs (Expected Value)	2011					2,937,789	2,922,795	2,903,795	231,942	229,789	227,337	205,070	202,315	156,045	9,737,981
PV 2011 Direct Costs (Expected Value)	2011					11,081,837	11,100,036	10,953,607	897,510	889,178	879,690	866,947	784,906	610,415	37,699,600
PV 2011 Total Site Costs (Expected Value)	**2011**					**14,019,626**	**14,022,831**	**13,857,402**	**1,129,453**	**1,118,967**	**1,107,028**	**1,072,016**	**987,221**	**766,460**	**47,437,581**