TABLE 4-1
Estimated Area and Volume Calculations for Proposed Remedial Action Areas
Focused Feasibility Study Evaluation

Reference Sample within Excavation Area	Area (square feet)	Depth (feet below ground surface)	Volume (cubic feet)	Volume (cubic yards)
Former Sewage Treatment Plant				
FSTP-CS-001	580	4	2,320	86
FSTP-CS-003	740	4	2,960	110
CS-FSTP-B03	100	10.5	1,050	39
SB-FSTP-015	100	6.5	650	24
		Total	**6,980**	**259**
Building 26				
PH-B026-004	250	5	1,250	46
		Total	**1,250**	**46**
Building 35/39 Area				
B35E-CS-005 and 006	96	3.5	336	12
B-35E-CS-002	75	4.5	338	13
		Total	**674**	**25**
Building 41 Area				
CS-PSA4-S04	2,520	6.5	16,380	607
B41E-CS-003	750	9	6,750	250
SB-UST41-01	150	9	1,350	50
		Total	**24,480**	**907**
Building 82/87/92/94 Area and Building 86				
AM-MW-101	2,612	2.5	6,530	242
AM-MW-102	100	2	200	7
SB-SD1-01	6,100	12.5	76,250	2,824
AM-TP-03	1,500	5.5	8,250	306
SB-SD1-08	1,500	10	15,000	556
AM-TP-05	600	4	2,400	89
AM-MW-104	300	4	1,200	44
AM-SD-03	100	1	100	4
AM-SD-02	100	2.5	250	9
PH-AMSD-05Q	100	6	600	22

TABLE 4-1
Estimated Area and Volume Calculations for Proposed Remedial Action Areas
Focused Feasibility Study Evaluation

Reference Sample within Excavation Area	Area (square feet)	Depth (feet below ground surface)	Volume (cubic feet)	Volume (cubic yards)
		Total	**110,780**	**4,103**
Perimeter Drainage Ditch (PDD)				
PDD-SD01	72,000	1.5	108,000	4,000
SS-PDUL-B01	6,000	3	18,000	667
HB-99-SD-29 and 29	260,000	1	260,000	9,630
		Total	**386,000**	**14,296**
PDD Spoils Piles				
Spoils Pile A	4,172	1	4,172	155
Spoils Pile B	57,674	1	57,674	2,136
Spoils Pile D	4,609	1	4,609	171
Spoils Pile E	4,273	1	4,273	158
Spoils Pile F	14,822	1	14,822	549
Spoils Pile G	5,302	1	5,302	196
Spoils Pile I	2,905	1	2,905	108
Spoils Pile J	833	1	833	31
Spoils Pile K	2,222	1	2,222	82
Spoils Pile L	100	1	100	4
Spoils Pile M	10,354	1	10,354	383
Spoils Pile N	5,590	1	5,590	207
		Total	**112,856**	**4,180**
Onshore Fuel Line - 54-Inch Line				
54-SD-12	1,650	10	16,500	611
54-SD-14	1,800	11.5	20,700	767
54-SD-20	1,600	10	16,000	593
54-SD-17	500	3	1,500	56
		Total	**54,700**	**2,026**
Onshore Fuel Line - Hangar Segrnent				
ATG(B)-051	400	4	1,600	59
ATG(B)-067	400	7.5	3,000	111
ATG(G)-277	150	0.58	87	3

TABLE 4-1
Estimated Area and Volume Calculations for Proposed Remedial Action Areas
Focused Feasibility Study Evaluation

Reference Sample within Excavation Area	Area (square feet)	Depth (feet below ground surface)	Volume (cubic feet)	Volume (cubic yards)
ATG(G)-280	200	3	600	22
ATG(G)-288	500	8	4,000	148
ATG(R)-044	900	4	3,600	133
ATG(R)-056	350	7.5	2,625	97
ATG(R)-059	250	3.5	875	32
ATG(R)-067	400	3	1,200	44
ATG(R)-072	800	7.5	6,000	222
ATG(R)-106	300	1.5	450	17
ATG(R)-114	500	7.5	3,750	139
ATG(R)-118	600	7.5	4,500	167
ATG-027	450	4.17	1,877	70
ATG-370	100	5	500	19
ATG-375	650	7.5	4,875	181
ATG-379	700	7.5	5,250	194
ATG-386	1,100	7.5	8,250	306
IT-003	400	7.5	3,000	111
ITLAT-04F	400	4	1,600	59
ITLAT-04B	100	4	400	15
		Total	**58,039**	**2,150**
Onshore Fuel Line - Northern Segment				
PRL-0305 to 325	5,000	4	20,000	741
PRL-0337	250	4	1,000	37
PRL-0471	300	4	1,200	44
PRL-0481	350	4	1,400	52
PRL-0491	350	4.5	1,575	58
PRL-0501	350	4	1,400	52
PRL-0511	250	3.5	875	32
PRL-0521	350	4	1,400	52
PRL-0531	400	4	1,600	59
PRL-0541	350	4	1,400	52

TABLE 4-1
Estimated Area and Volume Calculations for Proposed Remedial Action Areas
Focused Feasibility Study Evaluation

Reference Sample within Excavation Area	Area (square feet)	Depth (feet below ground surface)	Volume (cubic feet)	Volume (cubic yards)
PRL-0550	350	4	1,400	52
PRL-0559	400	4	1,600	59
PRL-0568	350	4	1,400	52
PRL-0577	500	3.5	1,750	65
PRL-0586	500	3.5	1,750	65
PRL-0595	500	3.5	1,750	65
PRL-0604	200	4	800	30
PRL-0616	250	4	1,000	37
PRL-0617	500	4	2,000	74
PRL-0630	350	4.5	1,575	58
PRL-0639	350	4.5	1,575	58
PH-SEG1-00D	60	5.5	330	12
		Total	**48,780**	**1,807**
Northwest Runway Area				
SL23-TW-004	400	15	6,000	222
		Total	**6,000**	**222**
Revetment Areas				
Revetment 1	17,259	1	17,259	639
Revetment 2	11,490	1	11,490	426
Revetment 3	12,985	1	12,985	481
Revetment 4	18,721	1	18,721	693
Revetment 6	10,000	1	10,000	370
Revetment 7	4,967	1	4,967	184
Revetment 11 - RVT-11-AS1	100	1.5	150	6
Revetment 11 - RVT-11-AS2	100	1.5	150	6
Revetment 11 - RVT-11-AS4	556	1	556	21
Revetment 12 - RVT-12-AS2	100	1.5	150	6
Revetment 12 - RVT-12-AS3	100	1	100	4
Revetment 13	11,544	1	11,544	428
Revetment 14	13,274	1	13,274	492

TABLE 4-1
Estimated Area and Volume Calculations for Proposed Remedial Action Areas
Focused Feasibility Study Evaluation

Reference Sample within Excavation Area	Area (square feet)	Depth (feet below ground surface)	Volume (cubic feet)	Volume (cubic yards)
Revetment 15	7,526	1	7,526	279
Revetment 16	13,154	1	13,154	487
Revetment 19	19,842	1	19,842	735
Revetment 20	13,746	1	13,746	509
Revetment 21	13,630	1	13,630	505
Revetment 22	12,458	1	12,458	461
Revetment 23	20,570	1	20,570	762
Revetment 25	13,269	1	13,269	491
Revetment 26	12,549	1	12,549	465
		Total	**228,090**	**8,448**
TOTAL EXCAVATION VOLUME			**1,038,628**	**38,468**

TABLE 4-2
Comparative Analysis

Site	Alternative 1 – No Further Action	Alternative 2 – Institutional Controls	Alternative 3 – Excavation And Offsite Disposal	Alternative 4 – Excavation And Onsite Disposal
Former Sewage Treatment Plant	Least effective of all alternatives because it would not be protective of human health and the environment throughout the development and maturation of the wetland. Offers a high degree of implementability since actions are not taken and there are no associated costs.	Offers a high degree of effectiveness in achieving RAOs. Potential risks to human health and ecological receptors would not exist because exposure to COCs would be eliminated through implementation of the final wetland design performance criteria. The alternative would provide a minimum of three feet of cover, prevent and monitor exposure of receptors to the concentrations of COCs detected above their chemical-specific RAOs. Less effective in reducing the site-specific contaminant mobility than Alternatives 3 and 4. This alternative would have minimal implementation obstacles because the controls would be fully considered and incorporated in preparation of the final wetland design. In addition, there are minimal associated costs.	This alternative would be protective of human health and the environment. Offers the highest degree of effectiveness in achieving RAOs and reducing contaminant mobility since the materials would be removed from the Inboard Area and from the BRAC Property. Offers a high degree of implementability since excavation is a widely used and accepted technology. However, the proximity of the excavation to the Perimeter Levee and PDD may complicate excavation activities. Excavation was to the extent practicable in the vicinity of the PDD during the interim removal actions. Special shoring may be required. This alternative is the most expensive.	This alternative would be protective of human health and the environment. Offers the higher degree of effectiveness in achieving RAOs and reducing site contaminant mobility, and than Alternatives 1 and 2 but not as effective as Alternative 3. Excavation of the contaminated material immediately removes the contaminants from the site; however, they remain onsite at a consolidation/disposal location. Also, the process of obtaining permits to build an Onsite Class II landfill may be complicated and time-consuming. Offers a high degree of implementability since excavation is a widely used and accepted technology. However, the proximity of the excavation to the Perimeter Levee and PDD may complicate excavation activities. Excavation was to the extent practicable in the vicinity of the PDD during the interim removal actions. Special shoring may be required. The costs associated with this alternative are greater than Alternatives 1 and 2.

TABLE 4-2
Comparative Analysis

Site	Alternative 1 – No Further Action	Alternative 2 – Institutional Controls	Alternative 3 – Excavation And Offsite Disposal	Alternative 4 – Excavation And Onsite Disposal
Building 26	Least effective of all alternatives because it would not be protective of human health and the environment throughout the development and maturation of the wetland. Offers a high degree of implementability since actions are not taken and there are no associated costs.	Offers a high degree of effectiveness in achieving RAOs. Potential risks to human health and ecological receptors would not exist because exposure to COCs would be eliminated through implementation of the final wetland design performance criteria. The alternative would maintain a minimum of three feet of cover, prevent and monitor exposure of receptors to the concentrations of COCs detected above their chemical-specific RAOs. Less effective in reducing the site-specific contaminant mobility than Alternatives 3 and 4. This alternative would have minimal implementation obstacles because the controls would be fully considered and incorporated in preparation of the final wetland design. In addition, there are minimal associated costs.	This alternative would be protective of human health and the environment. Offers the highest degree of effectiveness in achieving RAOs and reducing contaminant mobility since the materials would be removed from the Inboard Area and from the BRAC Property. Offers a high degree of implementability since excavation is a widely used and accepted technology. However, the proximity of Building 26 in relation to the excavation boundary could complicate excavation activities. Additionally, the area requiring further remedial action is at the bottom of a former UST excavation that has been backfilled; this backfill material would need to be removed to access the contaminated material. This alternative is the most expensive.	This alternative would be protective of human health and the environment. Offers the higher degree of effectiveness in achieving RAOs and reducing site contaminant mobility, and than Alternatives 1 and 2 but not as effective as Alternative 3. Excavation of the contaminated material immediately removes the contaminants from the site; however, they remain onsite at a consolidation/disposal location. Also, the process of obtaining permits to build an Onsite Class II landfill may be complicated and time-consuming. Offers a high degree of implementability since excavation is a widely used and accepted technology. Proximity of Building 26 in relation to the excavation boundary may complicate excavation activities. Additionally, the elevated samples are at the bottom of the previous excavation that has been backfilled with gravel that would have to be removed prior to excavation of the impacted soil. The costs associated with this alternative are greater than Alternatives 1 and 2.

TABLE 4-2
Comparative Analysis

Site	Alternative 1 – No Further Action	Alternative 2 – Institutional Controls	Alternative 3 – Excavation And Offsite Disposal	Alternative 4 – Excavation And Onsite Disposal
Building 35/39 Area	Least effective of all alternatives because it would not be protective of human health and the environment throughout the development and maturation of the wetland. Offers a high degree of implementability since actions are not taken and there are no associated costs.	Offers a high degree of effectiveness in achieving RAOs. Potential risks to human health and ecological receptors would not exist because exposure to COCs would be eliminated through implementation of the final wetland design performance criteria. The alternative would maintain a minimum of three feet of cover, prevent and monitor exposure of receptors to the concentrations of COCs detected above their chemical-specific RAOs. Less effective in reducing the site-specific contaminant mobility than Alternatives 3 and 4. This alternative would have minimal implementation obstacles because the controls would be fully considered and incorporated in preparation of the final wetland design. In addition, there are minimal associated costs.	This alternative would be protective of human health and the environment. Offers the highest degree of effectiveness in achieving RAOs and reducing contaminant mobility since the materials would be removed from the Inboard Area and from the BRAC Property. Offers a high degree of implementability since excavation is a widely used and accepted technology. However, the proximity of the excavation to the discharge pipe and concrete sump may complicate excavation activities. Excavation was to the extent practicable in the vicinity of the discharge pipe during the interim removal actions. Due to stability issues at the pipe and concrete sump, the excavation was kept 5 feet from the footings of both structures. Special shoring may be required. This alternative is the most expensive.	This alternative would be protective of human health and the environment. Offers the higher degree of effectiveness in achieving RAOs and reducing site contaminant mobility, and than Alternatives 1 and 2 but not as effective as Alternative 3. Excavation of the contaminated material immediately removes the contaminants from the site; however, they remain onsite at a consolidation/disposal location. Also, the process of obtaining permits to build an Onsite Class II landfill may be complicated and time-consuming. Offers a high degree of implementability since excavation is a widely used and accepted technology. Excavation was to the extent practicable in the vicinity of the discharge pipe during the interim removal actions. Due to stability issues at the pipe and concrete sump, the excavation was kept 5 feet from the footings of both structures. Special shoring may be required. The costs associated with this alternative are greater than Alternatives 1 and 2.

TABLE 4-2
Comparative Analysis

Site	Alternative 1 – No Further Action	Alternative 2 – Institutional Controls	Alternative 3 – Excavation And Offsite Disposal	Alternative 4 – Excavation And Onsite Disposal
Building 41 Area	Least effective of all alternatives because it would not be protective of human health and the environment throughout the development and maturation of the wetland. Offers a high degree of implementability since actions are not taken and there are no associated costs.	Offers a high degree of effectiveness in achieving RAOs. Potential risks to human health and ecological receptors would not exist because exposure to COCs would be eliminated through implementation of the final wetland design performance criteria. The alternative would maintain a minimum of three feet of cover, prevent and monitor exposure of receptors to the concentrations of COCs detected above their chemical-specific RAOs. However, contamination exists beneath Building 41 and this building is planned for removal during wetland construction. Less effective in reducing the site-specific contaminant mobility than Alternatives 3 and 4. This alternative would have minimal implementation obstacles because the controls would be fully considered and incorporated in preparation of the final wetland design. In addition, there are minimal associated costs.	This alternative would be protective of human health and the environment. Offers the highest degree of effectiveness in achieving RAOs and reducing contaminant mobility since the materials would be removed from the Inboard Area and from the BRAC Property. Offers a high degree of implementability since excavation is a widely used and accepted technology. However, the proximity to the Perimeter Levee and PDD may complicate excavation activities. Excavation was to the extent practicable in the vicinity of the PDD during the interim removal actions. Contamination exists beneath Building 41. Excavation of the material would not occur until Building 41 is demolished during wetland construction.	This alternative would be protective of human health and the environment. Offers the higher degree of effectiveness in achieving RAOs and reducing site contaminant mobility, and than Alternatives 1 and 2 but not as effective as Alternative 3. Excavation of the contaminated material immediately removes the contaminants from the site; however, they remain onsite at a consolidation/disposal location. Also, the process of obtaining permits to build an Onsite Class II landfill may be complicated and time-consuming. Offers a high degree of implementability since excavation is a widely used and accepted technology. Proximity to the Perimeter Levee and PDD may complicate excavation activities. Excavation was to the extent practicable in the vicinity of the PDD during the interim removal actions. Contamination exists beneath Building 41. Excavation of the material could not occur until demolition and removal of the building is conducted during wetland construction. The costs associated with this alternative are greater than Alternatives 1 and 2.

TABLE 4-2
Comparative Analysis

Site	Alternative 1 – No Further Action	Alternative 2 – Institutional Controls	Alternative 3 – Excavation And Offsite Disposal	Alternative 4 – Excavation And Onsite Disposal
Building 82/87/92/94 Area and Building 86	Least effective of all alternatives because it would not be protective of human health and the environment throughout the development and maturation of the wetland. Offers a high degree of implementability since actions are not taken and there are no associated costs.	Offers a high degree of effectiveness in achieving RAOs. Potential risks to human health and ecological receptors would not exist because exposure to COCs would be eliminated through implementation of the final wetland design performance criteria. The alternative would maintain a minimum of three feet of cover, prevent and monitor exposure of receptors to the concentrations of COCs detected above their chemical-specific RAOs. Less effective in reducing the site-specific contaminant mobility than Alternatives 3 and 4. This alternative would have minimal implementation obstacles because the controls would be fully considered and incorporated in preparation of the final wetland design. In addition, there are minimal associated costs.	This alternative would be protective of human health and the environment. Offers the highest degree of effectiveness in achieving RAOs and reducing contaminant mobility since the materials would be removed from the Inboard Area and from the BRAC Property. Offers a high degree of implementability since excavation is a widely used and accepted technology. Proximity to the New Hamilton Partnership Levee and the presence of asphalt and concrete may complicate excavation activities. This alternative is the most expensive.	This alternative would be protective of human health and the environment. Offers the higher degree of effectiveness in achieving RAOs and reducing site contaminant mobility, and than Alternatives 1 and 2 but not as effective as Alternative 3. Excavation of the contaminated material immediately removes the contaminants from the site; however, they remain onsite at a consolidation/disposal location. Also, the process of obtaining permits to build an Onsite Class II landfill may be complicated and time-consuming. Offers a high degree of implementability since excavation is a widely used and accepted technology. Proximity to the New Hamilton Partnership Levee and the presence of asphalt and concrete may complicate excavation activities. The costs associated with this alternative are greater than Alternatives 1 and 2.